Farnsworth GROUP

Storm Water Pollution Prevention Plan (SWPPP)

Casey's General Store
City of Franklin
Johnson County, Indiana

Owner: Casey's Marketing Company
One Convenience Boulevard
Ankeny, IA 50021
515.965.6100

Engineer: Farnsworth Group, Inc.
2211 West Bradley Avenue
Champaign, Illinois 61821
(217) 352-7408

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I. Introduction

A. Background

In 1972, Congress passed the Federal Water Pollution Control Act (FWPCA), also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waterways. The ultimate goal was to make sure that rivers and streams were fishable, swimmable, and drinkable. In 1987, the Water Quality Act (WQA) added provisions to the CWA that allowed the EPA to govern storm water discharges from industrial activities. EPA published the final notice for Phase I of the Multi-Sector General Storm Water Permit program (Federal Register Volume 60 No. 189, September 20, 1995, page 50804) in 1995 which included provisions for the development of a Storm Water Pollution Prevention Plan (SWPPP) by each industrial facility discharging storm water, including site construction activities.

Development, implementation, and maintenance of the SWPPP will provide Casey's Marketing Company with the tools to reduce pollutants contained in storm water discharges and comply with the requirements of the General Storm Water Permit issued by the State of Indiana for the project.

The primary goals of the SWPPP will be to:

- Identify potential sources of pollutants that affect storm water discharges from the site;
- Describe the practices that will be implemented to prevent or control the release of pollutants in storm water discharges;
- Create an implementation schedule to ensure that the practices described in this SWPPP are in fact implemented and to evaluate the plan's effectiveness in reducing the pollutant levels in storm water discharges; and
- Provide standardized erosion control inspection and reporting procedures.

B. REQUIREMENTS FOR THE GENERAL CONTRACTOR AND SUBCONTRACTOR(S):

The SWPPP shall provide forms for both the General Contractor and Subcontractor(s) identifying the Company Name, Business Address and Telephone Number along with the Responsible Person for the Contractor and all subcontractors' who will implement the measures identified in the SWPPP. The General Contractor shall sign the "General Contractor's Certification" and all Subcontractors shall sign the Subcontractor's Certification", verifying they have been instructed on how to comply with and fully understand the requirements of the IEPA and SWPPP. These certifications must be signed, by a responsible corporate officer on behalf of each entity, prior to the beginning of any construction activities and shall be filed in the project's SWPPP.

C. STORM WATER POLLUTION PREVENTION PROGRAM LOCATION REQUIREMENTS:

The SWPPP is meant to be a working document that shall be maintained at the site of the construction activities at all times throughout the project, shall be readily available upon request by the Operator's personnel or Indiana Department of Management (IDEM) or any other agency with regulatory authority over storm water issues, and shall be kept on-site until the site complies with the final stabilization and a Notice of Termination (NOT) has been submitted. A sign or other notice must be posted near the main entrance of the construction site which contains a completed NOI, the location of the SWPPP and the name and phone number of a contact person responsible for scheduling SWPPP viewing times, and any other state specific requirements. The Notice of Coverage (NOC) or other form notifying the applicant that coverage under the applicable permit has been obtained must also be posted, once received.

II. Site Description:

A. Project Location and Legal Description:

The proposed Casey's General Store will be located within the City of Franklin, Johnson County, Indiana. The site is located in the northeast corner of Earlywood Drive and Professional Drive. The current property address is 3048 US Highway 31, Franklin, Indiana, 46131. The project site is approximately 1.64 acres in size.

The project is located in Section 34, Township 13 North, Range 4 East. The property is bounded to the north by a commercial lot, to the east by US Highway 31, to the south by Earlywood Drive, and to the west by Professional Drive. Residential lots are located across the street from the site along Professional Drive and residential and commercial uses across the street along Earlywood Drive.

Latitude: 39° 31′ 15″ N
Longitude: 86° 04′ 36″ W

The legal descriptions of the project site is as follows:

Lot numbered 1 in Northpointe Commercial Subdivision, Section One, an addition to the City of Franklin as recorded in plat cabinet d, pages 423 a & b, and land surveyor's correction for scrivener's error as recorded October 28, 2002, as instrument #2002-035915, and land surveyor's correction for scrivener's error recorded November 01, 2002, as instrument number 2002-036753 in the Office of the Recorder of Johnson County, Indiana.

B. Description of the construction activity

The proposed Casey's General Store project will involve the demolition of existing curb for new driveways as shown on the site development plans dated October, X 2015. New construction on the site will include construction of the approximate 3,268 square foot convenience store, pavement areas for parking and fueling locations, and new utility services.

Off-site construction includes construction of the driveway accesses onto Earlywood Drive and onto Professional Drive as shown on the site construction plans.

Upon completion of the construction activities, approximately 50% of the site will be impervious (buildings and pavement). This impervious area will be controlled by the onsite detention basin constructed for the project. Refer to Sheet 5 of the construction plan set for the Casey's General Store.

C. Storm Water Drainage System:

The site will be graded in such a manner that an on-site storm drainage system will control the storm runoff for the site. Three (3) catch basins will be located within the parking area and two catch basins shall be located in the west approach to the site to control the storm runoff. The catch basins located in the parking area will be along the eastern curb line adjacent to the US 31 right of way.

Storm runoff from the convenience store and the canopy will be controlled via downspouts tied into the proposed storm system and detention system. The on-site storm drainage system will connect to the existing storm drain located north of the access drive connection to Professional Drive. Refer to the Site Grading Plan in Appendix J.

The public storm system discharges into the Powell Ditch west of the site. The Powell Ditch drains into the Youngs Creek south of the site.

D. Description of the intended sequence of major construction activities:

On-Site Work

1. Site superintendent shall hold a site meeting to discuss the SWPPP and the erosion control measures prior to any land disturbance
2. Install the temporary construction ingress/egress pad
3. Install perimeter erosion control devices and inlet protection on existing structures
4. Disconnect utility services and remove meters
5. Demolish existing building
6. Demolish existing pavement area per demolition plans
7. Clear and grub the remainder of site to be developed
8. Grade site as required for sub-grade elevations
9. Install underground utilities and appropriate meters
10. Install underground fuel tanks
11. Install curb inlet protection
12. Construct building foundation
13. Construct pavement areas
14. Construct convenience store
15. Permanently stabilize the landscape and lawn areas
16. Remove the temporary erosion control devices
17. Perform final site inspection to verify that all requirements of the SWPPP have been met.
18. Prepare the NOT form for the project and submit to IDEM

The Notice of Termination form (NOT) is to be completed by the SWPPP Coordinator for the project

E. Project Area:

The total project area for the Casey's General Store is approximately 1.64 acres. The total area to be disturbed by demolition, excavation and grading is estimated to be approximately 1.60 acres.

F. Existing Land Use:

The existing site is a vacant lot with lawn area.

G. Pre and Post Construction Peak Discharges:

The following are the pre-construction and post-construction estimates of peak discharge for the 1.639 acre site:

- The total pre-construction 10-year 24-hour peak discharge has been estimated to be approximately 4.61 cfs.
- The total post-developed 100-year 24-hour peak discharge has been estimated to be approximately 11.23 cfs.

H. Soil Types at Project Site:

The existing soil types for the project site are Crosby silt loam (CrA) as defined by the National Resource Conservation Survey (NCRS) for Johnson County, Indiana. See Appendix F for the soils map and other soils information of the project area.

I. Receiving Waters:

Storm drainage for the site will be handled via a storm drainage system and storm water detention facility located on the project site. The stormwater discharged from the detention basin shall discharge into the existing City storm system located in the Earlywood Drive right of way. The City storm system will ultimately discharge into the Powell Ditch to Youngs Creek.

J. Hydrologic Codes:

The following hydrologic code is associated with the project site:

05120204090030

K. Wetlands Permit:

The proposed project site does not have any isolated wetlands on-site. The project site was previously developed for residential uses. An Isolated Wetlands Permit is not required from the Indiana Department of Environmental Management.

L. Sinkholes, Wells, Floodplains, and Watercourses

No sinkholes or abandoned or uncapped wells, or watercourses are known to be on or adjacent to the project site. The site is outside of the Federal Emergency Management Agency mapped 100-year floodplain limits as delineated on Map Panels 18081C0139D Dated August 2, 2007. Refer to Appendix D.

M. Potential Contaminants:

The following pollutants of concern will be associated with the construction of this project:

- ☒ Soil Sediment
- ☒ Concrete
- ☒ Concrete Truck Waste
- ☒ Concrete Curing Compounds
- ☒ Paints
- ☒ Petroleum (gas, diesel, oil, kerosene, hydraulic oil / fluids)
- ☒ Antifreeze / Coolants
- ☒ Solvents
- ☐ Fertilizers / Pesticides
- ☐ Other (specify)

III. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in II.D. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor shall provide to the engineer a plan for the implementation of the measures indicated. The contractor, and subcontractors, will notify the engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the permit:

A. Erosion and Sediment Controls

1. **Stabilized Practices:** Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include, but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in III(A)(1) and III(A)(2), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 15 days after the construction activity in that portion of the site has temporarily or permanently ceased.

   Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

   The following Stabilization Practices will be used for this project:

☐	Preservation of Mature Vegetation	☒	Erosion Control Blanket / Mulching
☐	Vegetated Buffer Strips	☐	Sodding
☐	Protection of Trees	☐	Geotextiles
☒	Temporary Erosion Control Seeding	☐	Seeding of Ditches
☐	Temporary Turf	☐	Other (specify)
☒	Temporary Mulching	☐	Other (specify)
☒	Permanent Seeding	☐	Other (specify)

   Describe how the Stabilization Practices listed above will be utilized:

   Temporary seeding shall be shall be used to stabilize disturbed areas in which permanent seeding is not desired or to provide a vegetative cover until a permanent non-erosive cover can be established. The installation and maintenance of the seeding shall be as described in the ISWQM.

   Temporary mulching shall be used to provide temporary stabilization of the ground surface until permanent non-erosive cover can be established. Mulching is typically used to conserve ground moisture, moderate the soil temperature and to provide protection for permanent seed germination. The installation and maintenance of the temporary mulching operation shall be as described in the ISWQM.

   The permanent seeding and mulching will be done as soon as practical to keep erosion to a minimum. For permanent seeding in the State right-of-way use Indiana Department of Transportation (INDOT) Seed Mixture R. For areas outside the State right-of-way the contractor shall use the seeding for the appropriate mixture based on the site conditions as outlined in the Indiana Storm Water Quality Manual (ISWQM), Chapter 7. The installation and maintenance of the seeding shall be as described in the ISWQM.

   Erosion control blankets will be installed over slopes steeper than 4:1 and in high velocity areas. As an interim control, temporary erosion control seeding and mulching will be utilized. For temporary seeding in the State right-of-way use INDOT Seed Mixture T. Note that between December 31 and March 15 only mulch should be used, not seed. For non-State right-of-way areas INDOT Seed Mixture T may also be used. For the approved temporary seeding and optimum dates for seeding in non-State right-of-way

locations see the ISWQM temporary seeding specifications. Note that mulch alone is an acceptable temporary cover and may be used in lieu of temporary seeding, provided that it is appropriately anchored.

2. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices shall be done in accordance with the ISWQM and may be subject to Section 404 of the Clean Water Act.

   The following Structural Practices may be used for this project:

☒ Silt-Fence	☐ Energy Dissipater
☐ Temporary Bale Ditch Check	☐ Riprap-lined channel
☒ Inlet and Pipe Protection	☐ Gabions
☐ Sediment Trap	☐ Slope Mattress
☐ Temporary Pipe Slope Drain	☐ Retaining Walls
☒ Temporary Sediment Basin	☐ Slope Walls
☐ Temporary Stream Crossing	☐ Concrete Revetment Mats
☒ Temporary Construction Entrances/Exits	☐ French Drain
☐ Silt-Fence Ditch Check	☐ Flat Bottom Ditch
☐ Permanent Check Dams	☐ Rock Check Dam
☐ Permanent Sediment Basin	☒ Other (specify) Laydown Yard Concrete Washout Area
☐ Aggregate Ditch	☒ Other (specify) Flexstorm Inlet Filter
☐ Paved Ditch	☐ Other (specify)

   Describe how the Structural Practices listed above will be utilized:

   Silt-fence will be used to intercept and retain sediment carried by sheet flow from disturbed areas and to prevent sediment runoff from the project site and the substation. The fence will be placed downslope of the disturbed area where sheet flow will occur. The installation shall be as described in the ISWQM. See Appendix J for silt fence locations and Appendix E for a detail.

   As work proceeds, the upstream ends of the storm drainage system will be protected with appropriate curb inlet protection to keep silt from washing into storm drainage system and the stormwater detention facility and off the project site. The installation shall be as described in the ISWQM.

   Depending upon timing of construction, the proposed storm water management basin may be used as a temporary sediment basin. Prior to final stabilization of the basin, the silt material must be excavated and disposed of properly, and the final grades in the detention area must be verified that they meet the design plan requirements.

   A stabilized temporary construction entrance/exit must be constructed to prevent tracking of sediments onto public roadways. The installation and maintenance of the temporary entrance/exit shall be as described in the ISWQM. See Appendix E for detail.

   Laydown yard concrete washout areas reduce pollutants resulting from cleaning of washout chutes and hoppers following delivery of concrete material. A designated area must be set aside and installation shall be as described in the ISWQM.

   Flexstorm inlet protection will be used to intercept sediment before it enters the storm drainage system. These filters trap the sediment while allowing full use of the pavement areas during construction. See Appendix J for silt fence locations and Appendix E for a detail.

3. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices should be done in accordance with the ISWQM and may be subject to Section 404 of the Clean Water Act.

   a. Such practices may include, but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

   b. The storm water detention basin located on the site will be constructed early in the project. The basin may be used for sediment control. If the basin is to be used as a temporary sediment basin, the contractor must clean the sediment out of the basin and return the basin to the design grades and verify the design volumes prior to permanently seeding the basin. The storm water detention basin will remain in place after construction to provide permanent stormwater detention for the project.

4. **Other Controls:**

   a. Material Delivery, Storage, and Use – The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:

      - All products delivered to the project site must be properly labeled.
      - Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
      - A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.
      - Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
      - Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the engineer of this location.

   b. Stockpile Management – BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as, but not limited to, portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. Unvegetated areas that are scheduled or likely to be left inactive for fifteen (15) days or more must be temporarily or permanently stabilized with measures appropriate for the season to minimize erosion potential. The following BMPs may be considered:

      - Perimeter Erosion Barrier
      - Temporary Seeding
      - Temporary Mulch
      - Storm Drain Inlet Protection

      All BMP's used for stockpile management are to be installed and maintained in accordance with the ISWQM.

   c. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

   d. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

e. The contractor shall provide a written and graphic plan to the engineer identifying where each of the above areas will be located and how they are to be managed.

5. Approved State or Local Laws

The management practices, controls and provisions contained in this plan will be in accordance with IDEM specifications.

IV. Installation and Maintenance:

The following is a description of procedures that will be used to install and maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan.

During construction the Contractor shall: clean up and grade the work area to eliminate concentrated areas of runoff; cover the open ends of pipes in trenches at the close of each working day; maintain or replace (if specified by IDEM or the engineer) erosion control and sediment control items. Prior to any landscaping/restoration work, the Contractor shall remove and dispose of silt retained by temporary silt fence or inlet protection and add riprap and/or aggregate as needed to the vehicle entrances. All erosion control measures shall be maintained as described in the ISWQM.

All maintenance and erosion control systems will be the responsibility of the Contractor. All locations where vehicles enter and exit the construction site should be inspected daily. All other erosion control measures and areas subject to erosion should be inspected at least once every seven (7) days and within 24 hours of each measurable storm event. The State of Indiana defines a measurable rain event as a precipitation accumulation of 0.5" or greater. The Contractor shall sweep or clean the adjacent roadways daily if any dirt or debris is tracked onto the adjacent roadway. Flushing dirt or debris into inlets, catch basins or storm sewers is not permitted.

The Contractor shall follow inspection procedures as outlined in Section V.

The following outlines the installation and maintenance practices for expected for this project:

Temporary Construction Entrance/Exit

Installation:

1. Clear and grub area for the temporary construction entrance/exit
2. Grade foundation for positive drainage.
3. Place geotextile fabric on graded foundation
4. Place aggregate (INDOT CA No. 2) to a depth of 4" and slope for drainage
5. Top dress the aggregate with 2" of INDOT CA No. 53
6. Divert stormwater away from the pad and public right of way

Maintenance

1. Inspect daily
2. Reshape pad as needed for drainage control
3. Top dress with CA No. 53 as needed
4. Remove mud and debris from pad to prevent tracking of material onto public right of ways
5. Remove the stone and geotextile fabric upon completion of project

Silt Fence

Installation:

1. Install silt fence parallel to the contour of the slope
2. Excavate an 8" x 4" trench along the silt fence line
3. Install the silt fence with filter fabric located on the up-slope of the trench and stakes on the down-slope side of the trench
4. Drive the stakes at least 18" into the ground. Stretch the filter fabric between the posts
5. Lay the lower four inches of the filter fabric on the bottom of the trench
6. Backfill the trench and compact in place.

Maintenance

1. Inspect within 24 hours of a rain event and at least every 7 days
2. Replace the silt fence if the fabric tears, starts to decompose, or otherwise is ineffective
3. Remove deposited sediment when the filter fabric reaches the one-half point or bulges due to the accumulation of the sediment.

Concrete Washout

Installation:

1. Locate washout area and grade the base and remove rocks and other debris from area.
2. Install the polethelyne lining. The lining should be installed over the pooling area and with enough material to extend over the berm area. Fasten the lining with pins, staple or other fasteners.
3. Place flags or safety fencing around the area to provide a barrier to construction equipment and traffic
4. Install signage to identify the washout area.

Maintenance

1. Inspect daily and within 24 hours of a rain event
2. Inspect the integrity of the washout area and check for leaks, spills or tracking of soil by equipment
3. Check the lining for tears and punctures; replace if necessary
4. Remove and dispose of concrete that has hardened, and when the basin reaches 50% of capacity. Dispose of the concrete in a legal manner
5. Repair the structure as necessary once the concrete has been removed
6. Install a new liner after every cleaning of the concrete material from the basin
7. Inspect the construction site regularly to make sure contractors and suppliers are using the washout area. If violations are noted, clarify requirements with the offending party.
8. When the washout area is no longer required, dispose of any concrete within the basin and the liner as noted above. Backfill, grade and stabilize the washout area for final use as designated on the plans.

FlexStorm Inlet Filters

Installation:

1. Identify storm inlets onsite and offsite that will need filters. Verify filter sizes and install for inlets as shown on the grading plan.
2. Ensure inlet grate is properly seated in the inlet frame to hold the inlet filter in place

Maintenance

1. Inspect within 24 hours of a rain event and at least every 7 days
2. Replace the inlet filter if the fabric tears, starts to decompose, or otherwise is ineffective
3. Remove deposited sediment when the inlet filter reaches the one-half of its capacity

Permanent Seeding

Installation:

1. Apply the seed uniformly through the use of a broadcast seeder
2. Ensure good seed to soil contact by firming the seedbed with a roller
3. Mulch the seeded areas

Maintenance

1. Inspect within 24 hours of a rain event and at least every 7 days
2. Check for erosion of soil or mulch; replace or repair as necessary
3. Fertilize after one year as necessary to help maintain and establish growth

Temporary Seeding

Installation:

1. Select seed mixture based upon need and time of year to be installed. Refer to Table 1 on page 32 of the Indiana SWQM
2. Apply the seed uniformly with a broadcast spreader
3. Apply mulch cover

Maintenance

1. Inspect within 24 hours of a rain event and at least every 7 days
2. Check for erosion of soil or mulch; replace or repair as necessary
3. Monitor for erosion damage and adequate cover (80% density). Reseed, fertilize and apply mulch if necessary.

Compost Mulching

Installation

1. Remove existing rocks, large soil clods, stumps, roots and existing vegetation
2. Scarify slope area
3. Aerate areas to be covered by mulch
4. Broadcast a minimum of 1 pound of nitrogen, ½ pound of phosphorous and ½ pound of potash per 1000 SF of area
5. Apply compost to area with a pneumatic blower within 3 days of aeration. Apply seed at time or installation if required.
6. Water compost mulch for a period of 60 days following application.
    a. Mist blanket for first seven days then every three days for the 60 day period
    b. Maintain moisture content at 40-60%

Maintenance

1. Inspect the mulch area within 24hours of a rainfall event and at least every 7 days
2. Repair eroded areas
3. Reseed if applicable

V. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of each measurable rain event.

A. Disturbed areas, and use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.) be inspected for evidence of, or the potential for, pollutants to leave the site. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking. During each inspection the construction inspector shall complete the Inspection Form located in Appendix G.

B. Based on the results of the inspection, the description of potential pollutant sources identified in Section V-A above and pollution prevention controls identified in Section III shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation.

C. Following the completion of construction and seeding/planting activities, the construction inspector shall conduct periodic site reviews to make sure that vegetation establishment as required by the Indiana Storm Water Quality Manual is satisfactory. If vegetative cover is not adequate, special steps to correct problems will be implemented, such as over-seeding, mulching, sodding or the use of erosion control blankets.

D. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with Section V-B shall be made and retained as part of the plan for at least three (3) years after the date of the inspection.

VI. Spill Prevention and Control Plan

This section comprises the Spill Prevention and Control Plan (SPCP), which describes measures to prevent, control, and minimize impacts from a spill of a hazardous, toxic, or petroleum substance during construction of the proposed Project. This plan identifies the potentially hazardous materials to be used during this Project, describes the transport, storage, and disposal procedures for these substances, and outlines the procedures to be followed in the event of a spill of a contaminating or toxic substance.

A Spill Prevention Control and Countermeasures (SPCC) Plan must be prepared if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the navigable waters of the United States.

A. Good Housekeeping – The following is a list of good housekeeping practices to be used during the project:
   - Store the minimum amount of hazardous materials on site.
   - Materials stored on-site will be stored in a neat and orderly manner in appropriate containers. If possible, the materials will be stored under a roof or other enclosure.
   - Products will be kept in original containers with the original manufacturer's label.
   - Hazardous materials, chemicals, fuels, oils shall not be stored within 100 feet of any stream bank, wetland water supply well, spring or other body of water.
   - Fueling of construction equipment shall not occur within 100 feet of any stream bank, wetland, water supply well, spring or other body of water.
   - Substances will not be mixed with one another unless recommended by the manufacturer.
   - Whenever possible all of the product will be used before disposing of the container.
   - Follow the manufacturer's recommendations for proper use and disposal of a product.
   - If extra product must be disposed of, follow the manufacturer's or local and state recommended methods for proper disposal.

B. Non-Petroleum Products – Care shall be taken to follow all directions and warnings for the products used on site. Refer to the onsite Material Safety Data Sheets (MSDS).

C. Petroleum Products – On site vehicles will be monitored for leaks and receive regular maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers that are clearly labeled. Preferably, the containers will be stored in a covered truck or trailer that provides secondary containment for the products. Bulk storage tanks having a capacity of greater than 55 gallons will be provided with secondary containment consisting of a temporary earthen berm or other method. The contractor shall inspect the contents of the secondary containment area for excess water after each rainfall event. If no sheen is visible the collected water can be pumped to the ground in a manner that does not cause scouring. If any sheen is present it must be treated prior to discharging the water. If the contaminated water isn't treated it must be transported off site and disposed of according to any local, state and federal regulations and requirements.

D. Spill Control and Cleanup – The following practices will be utilized to prevent storm water pollution in the event of a spill:
   - On-site personnel will be made aware of cleanup procedures and the location of spill cleanup equipment.
   - Spills will be contained and cleaned up immediately after discovery.
   - Manufacturer methods for spill cleanup of a material will be followed as described on the Material Data Safety Sheet (MSDS).
   - Materials and equipment needed for cleanup procedures will be kept readily available on-site, either at an equipment storage area or on contractor's trucks. Equipment to be kept on-site will include, but not be limited to, brooms, dust pans, shovels, granular absorbents, sand, saw dust, absorbent pads and brooms, plastic and metal trash containers, gloves and goggles.
   - Toxic, hazardous or petroleum product spills required to be reported by regulation will be documented to the appropriate federal, state and local agencies.
   - Spills will be documented and a record of the spills will be kept with this SWPPP.

E. Reportable Spills – The federal reportable spill quantity for petroleum products is defined in 40 CFR 110 as any oil spill that:
   - Violates applicable water quality standards
   - Causes a film or sheen upon or discoloration of the water surface or adjoining shoreline
   - Causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines

The federal reportable spill quantities for hazardous materials are listed in 40 CFR, Part 3.02.4, in the table entitled "List of Hazardous Substances and Reportable Quantities". A procedure for determining a reportable spill is included in Appendix H, along with a copy of the Spill Report Form to be completed as the result of a reportable spill.

In the State of Indiana a spill is defined as any unexpected, unintended, abnormal, or unapproved dumping, leakage, drainage, seepage, discharge or other loss of petroleum, hazardous substances, extremely hazardous substances or objectionable substances. The term does not include releases to impermeable surfaces when the substance does not migrate off the surface or penetrate the surface and enter the soil. A reportable quantity is defined as the amount of a hazardous substance or extremely hazardous substance that is required to be reported under federal law under 42 U.S.C.9602(a) and (b) and 42 U.S.C.9603(a). (40 CFR 302.4 or 40 CFR 355 Appendix A.).

If a spill is reportable the contractor's superintendent will, within 15 minutes of discovering the spill, contact _____ at (___) _____ and the following authorities:

Federal:

National Response Center: (800) 424-8802
US EPA, Region V, 24-hour Emergency Response: (312) 353-2318

State:

IDEM 24-hour Emergency Response Spill Line: (888) 233-7745
State Emergency Management Agency: (800) 669-7362

If a reportable release occurs a modification to the SWPPP must be made within 14 days. The modification will include:

- Date of the spill.
- Description of the spill.
- Explanation of why the spill happened.
- Description of procedures to prevent future spills from happening.
- Description of response procedures if a second spill occurs within 14 days of the first spill.

A written description of the release must be submitted to the permitting authority that includes a description of the release, including the date of the spill, the type of material and estimated amount of the spill, an explanation of why the spill happened and a description of the steps taken to prevent and control future spills.

VII. Non-Storm Water Discharges:

Except for flows from fire fighting activities, sources of non-storm water that are combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

A. Spill Prevention and Control – BMPs shall be implemented to contain and clean-up spills and prevent material discharges from leaving the site. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the engineer of any spills immediately.

B. Concrete Residuals and Washout Wastes – The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:
   - Temporary Concrete Washout Facilities shall be constructed and maintained in accordance with the ISWQM. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
   - The contractor shall have the location of temporary concrete washout facilities approved by the owner.
   - All temporary concrete washout facilities are to be inspected by the contractor daily and after each measureable storm event.
   - Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Concrete waste solids/liquids shall be disposed of properly in accordance with the ISWQM.

C. Litter Management – A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.

D. Vehicle and Equipment Cleaning – Vehicles and equipment are to be cleaned in designated areas only, preferably off site. Any erosion control measures required for the cleaning shall be installed and maintained per the ISWQM.

E. Vehicle and Equipment Fueling – A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the engineer in writing as to which BMPs will be used on the project. The contractor shall also inform the engineer in writing how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:

   - Containment
   - Spill Prevention and Control
   - Use of Drip Pans and Absorbents
   - Automatic Shut-Off Nozzles
   - Topping Off Restrictions
   - Leak Inspection and Repair

F. Vehicle and Equipment Maintenance – On-site maintenance must be performed in accordance with all environmental laws, including proper storage of and no dumping of old engine oil or other fluids on site.

VIII. Failure to Comply:

The IDEM and the Environmental Protection Agency (EPA) have substantial penalties for non-compliance with the permit. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the permit and the statutes under which it was issued and is grounds for enforcement action. This enforcement action includes, but is not limited to, denial of permit renewal application, fines, imprisonment, and termination of coverage under this permit.

IX. Assessment of Storm Water Pollution Prevention – Post Construction Component:

A. Description of Pollutants and Their Sources Associated with the Proposed Land Use

As described in Section II.B, this construction project includes the construction of new storm drainage system, construction of a new convenience store and associated parking and fueling areas.

No vehicle maintenance, or cleaning will be conducted at the project site. Spill cleanup materials will be on hand for any fuel spills. Spilled materials will be cleaned up as soon as practical.

During the site construction for the Casey's general Store, soil sediment, concrete and concrete waste, paints and solvents shall be used on site, and petroleum and coolant/antifreeze waste may be expected on the site. Soil sediment will be generated from the site grading and utility installations for the project. Concrete and concrete waste may be generated during the construction of the building foundations and the concrete pavement. Paints and solvents will be generated as the result of store finishing. Petroleum and Antifreeze/coolant pollutants may be generated from vehicular traffic associated with the store construction. Excessive amounts of these pollutants are to be cleaned up immediately and disposed of in accordance with local and State requirements.

B. Sequence Describing Storm Water Quality Measure Implementation

All permanent storm water quality measures will be installed and implemented prior to the Casey's General Store opening. The construction of the Casey's General Store is anticipated to start May 1, 2016 and to be completed by September 1, 2016.

C. Description of Proposed Post Construction Storm Water Quality Measures

The Casey's General Store construction project has been designed to minimize the generation of post-construction pollutants. Post-construction storm water quality measures will improve the quality of storm water discharge from the site.

Storm water drainage generated at the site will be directed to the stormwater detention facility via the on-site storm drainage system. As part of the regular housekeeping inspections for the fueling stations and fuel tank loading area, Casey's Marketing Company personnel, will inspect the storm water detention area and the storm inlets for potential failures/damage. Refer to the Grading Plan in Appendix J.

Any part of the drainage system not functioning properly shall be repaired as quickly as possible.

D. Description of Maintenance Guidelines for Post-Construction Water Quality Measures

Pollutant control involves identifying and implementing best management practices, which when implemented properly will effectively reduce the potential for releases of pollutants into the environment and mitigate the impacts if a release were to occur. The project will employ the following best management practices with regard to the fueling stations to reduce the risk of spills and storm water runoff contamination:

Vegetative cover will be maintained on site to reduce the velocity of storm water runoff and thereby reduce erosion damage. The pervious areas on site will be permanently seeded or landscaped in accordance with the City of Franklin, Indiana requirements. The majority of the site will be covered with either the new building footprint or the new parking and fueling areas.

Good housekeeping best management practices aimed at minimizing the risks of storm water contamination include immediately cleaning up spills and drips, maintaining the lawn areas, and regular trash service to minimize debris entering the inlets.

A Casey's General Store Spill Prevention Control and Countermeasures (SPCC) Plan will be created that addresses procedures, methods, and equipment used to prevent and control spills. Specifically, the

SPCC Plan will identify where petroleum fuel product spills could occur and where they would discharge into the storm drainage system. Petroleum fuel product spill response procedures will also be outlined.

Casey's General Store personnel will conduct regular housekeeping inspections of fueling stations and fuel storage areas. The vegetation will also be inspected during the housekeeping inspections. The housekeeping inspection will be conducted in conjunction with regular SPCC inspections. The SPCC inspections will address fuel storage and handling areas.

Appendix A

Index of required Plan Elements

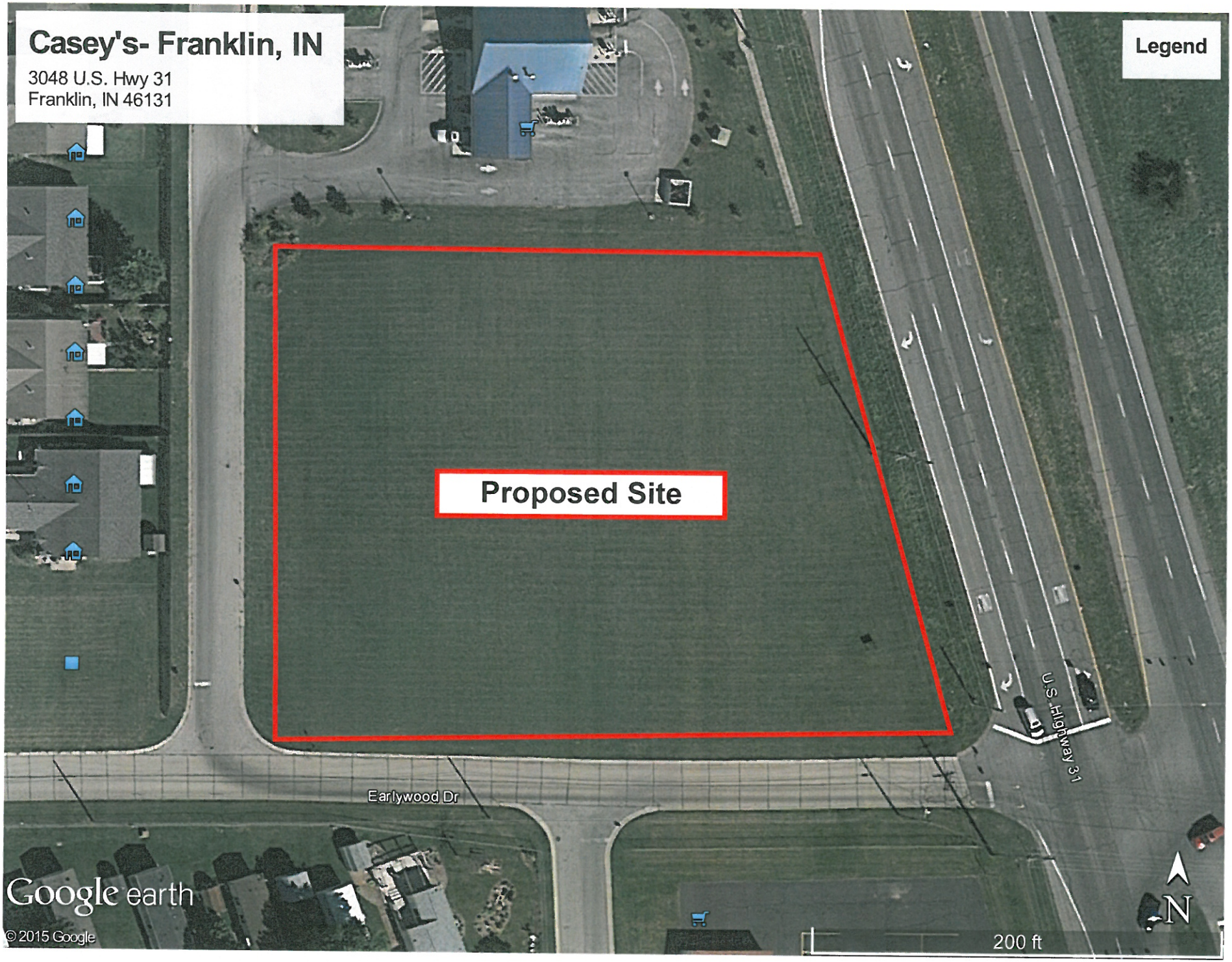
Assessment of Construction Plan Elements *(Section A)*

Item #	Description	Location in Plan
A1	Index showing locations of required plan elements	Appendix A
A2	11"X17" plat showing building lot numbers/boundaries and road layout/names	Appendix J
A3	Narrative describing the nature and purpose of the project	Section II.A
A4	Vicinity map showing project location	Appendix C
A5	Legal Description of the project site (including Latitude and Longitude)	Section II.A
A6	Location of all lots and proposed site improvements (roads, utilities, etc.)	Appendix J
A7	Hydrologic unit code	Section II.J
A8	Notation of any state or federal water quality permits	Section II.K
A9	Specific points where stormwater discharge will leave the site	Section II.C and Appendix J
A10	Location and name of all wetlands, lakes and water courses on and adjacent to the site	Section II.L
A11	Identification of all receiving waters	Section II.I
A12	Identification of potential discharges to ground water (sinkholes, abandoned wells, etc.)	Section II.L
A13	100 year floodplains, floodways, and floodway fringes	Section II.L and Appendix D
A14	Pre-construction and post construction estimate of peak discharge	Section II.G
A15	Adjacent land use, including upstream watershed	Section II.A
A16	Locations and approximate boundaries of all disturbed areas (construction limits)	Section II.B
A17	Identification of existing vegetative cover	Section II.F
A18	Soils map including soil descriptions and limitations	Appendix F
A19	Locations, size and dimensions of proposed stormwater systems (pipes, swales, channels, etc.)	Appendix J
A20	Plans for any off-site construction activities associated with this project (sewer/water tie-ins)	Section II.B
A21	Locations of proposed soil stockpiles and/or borrow/disposal areas	Not Applicable
A22	Existing site topography at an interval appropriate to indicate drainage patterns	Appendix J
A23	Proposed final topography at an interval appropriate to indicate drainage patterns	Appendix J

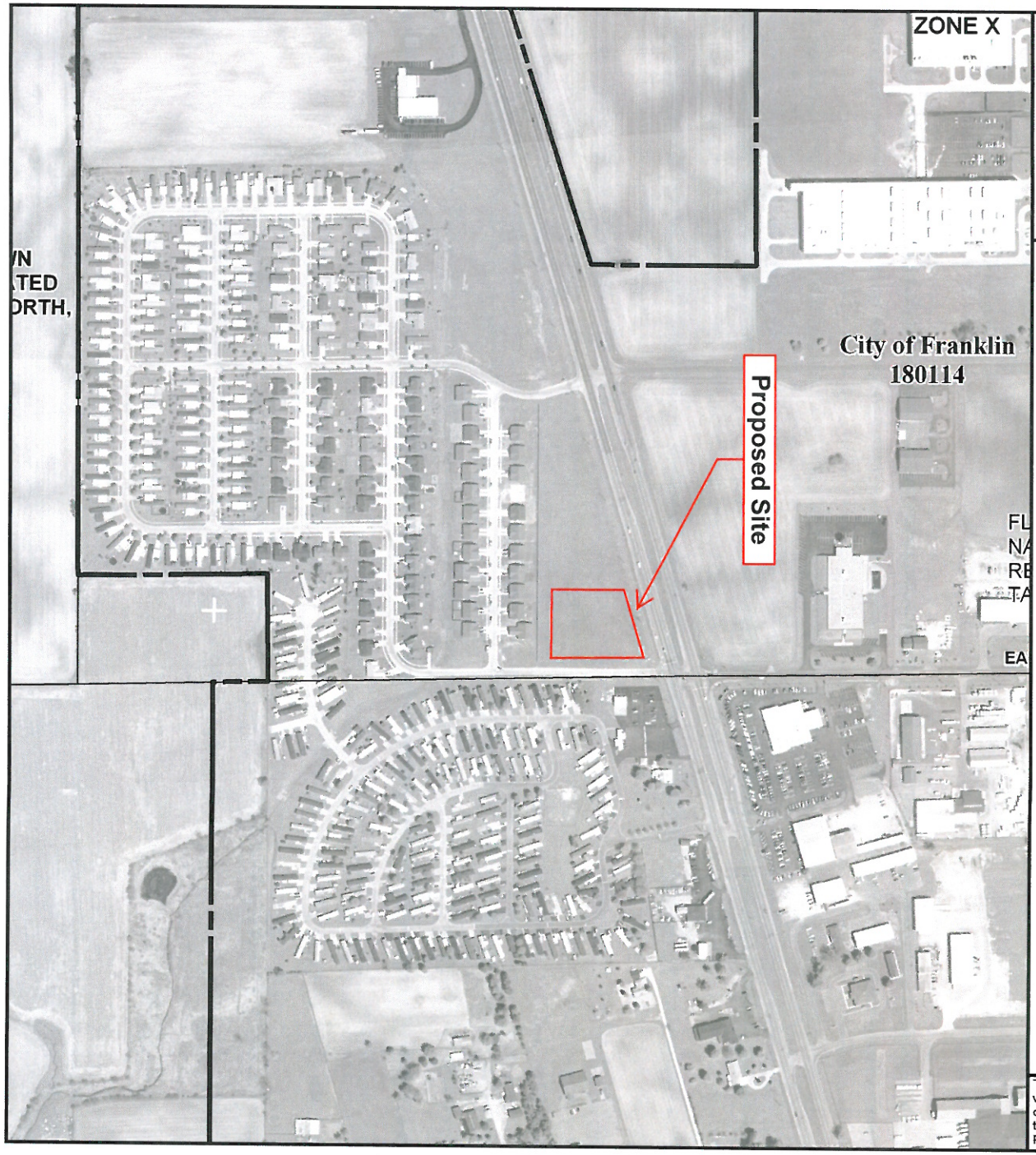
Assessment of Stormwater Pollution Prevention Plan *(Section B)*		
Item #	**Description**	**Location in Plan**
B1	Description of potential pollutant sources associated with construction activities	Section II.M
B2	Sequence describing stormwater quality measure implementation relative to land disturbing activities	Section II.D
B3	Stable construction entrance locations and specifications (at all points of ingress and egress)	Section IV
B4	Sediment control measures for sheet flow areas	Section III.A and Appendix E
B5	Sediment control measures for concentrated flow areas	Not Applicable
B6	Storm sewer inlet protection measure locations and specifications	Section III.A and Appendix E
B7	Runoff control measures (diversions, rock check dams, slope drains, etc.)	Not Applicable
B8	Stormwater outlet protection specifications	Not Applicable
B9	Grade stabilization structure locations and specifications	Not Applicable
B10	Location, dimensions, specifications and construction details of each stormwater quality measure	Appendix F and Appendix J
B11	Temporary surface stabilization methods appropriate for each season (include sequencing)	Section III.A.1 and Appendix E
B12	Permanent surface stabilization specifications (include sequencing)	Section III.A.1 and Appendix E
B13	Material handling and spill prevention plan	Section VI and VII
B14	Monitoring and maintenance guidelines for each proposed stormwater quality measure	Section IV and V
B15	Erosion and sediment control specifications for individual building lots	Not Applicable
Construction - Post Construction Component *(Section C)*		
Item #	**Description**	**Location in Plan**
C1	Description of pollutants and their sources associated with the proposed land use	Section IX.A
C2	Sequence describing stormwater quality measure implementation	Section IX.B
C3	Description of proposed post construction stormwater quality measures (including written description of how these measures	Section IX.C
C4	Locations, dimensions, specifications and construction details of each stormwater quality measure	Appendix J
C5	Description of maintenance guidelines for post construction stormwater quality measures	Section IX.D

Appendix B

Appendix C


Casey's- Franklin, IN
3048 U.S. Hwy 31
Franklin, IN 46131
Legend
Proposed Site
Earlywood Dr
U.S. Highway 31
Google earth
© 2015 Google
200 ft
N

Appendix D



MAP SCALE 1 " = 500 '

250 0 500 1000 FEET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0139D

FIRM

FLOOD INSURANCE RATE MAP

JOHNSON COUNTY, INDIANA

AND INCORPORATED AREAS

PANEL 139 OF 352

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FRANKLIN, CITY OF	180114	0139	D
JOHNSON COUNTY	180111	0139	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
18081C0139D
EFFECTIVE DATE
AUGUST 2, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

U.S. Fish and Wildlife Service
National Wetlands Inventory

Casey's - Franklin, IN

Sep 22, 2015

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

Riparian Status

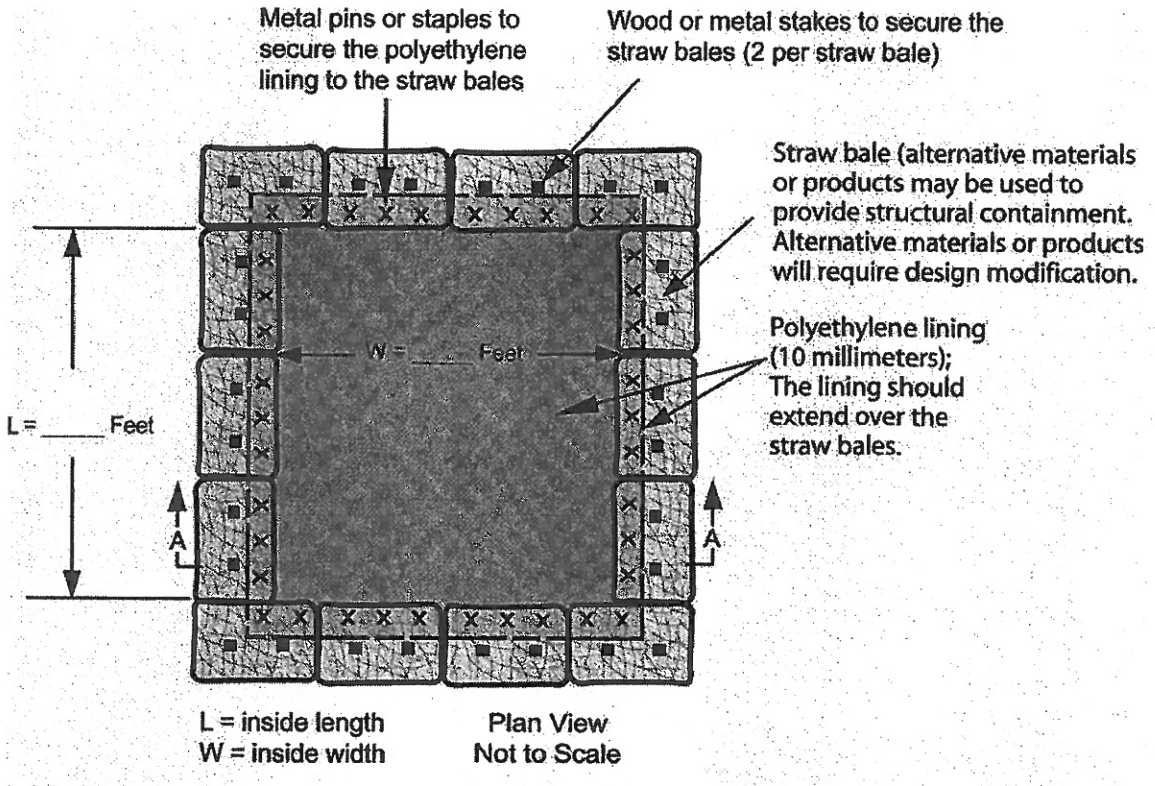
- Digital Data

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Appendix E

Concrete Washout (Above Grade System) Worksheet



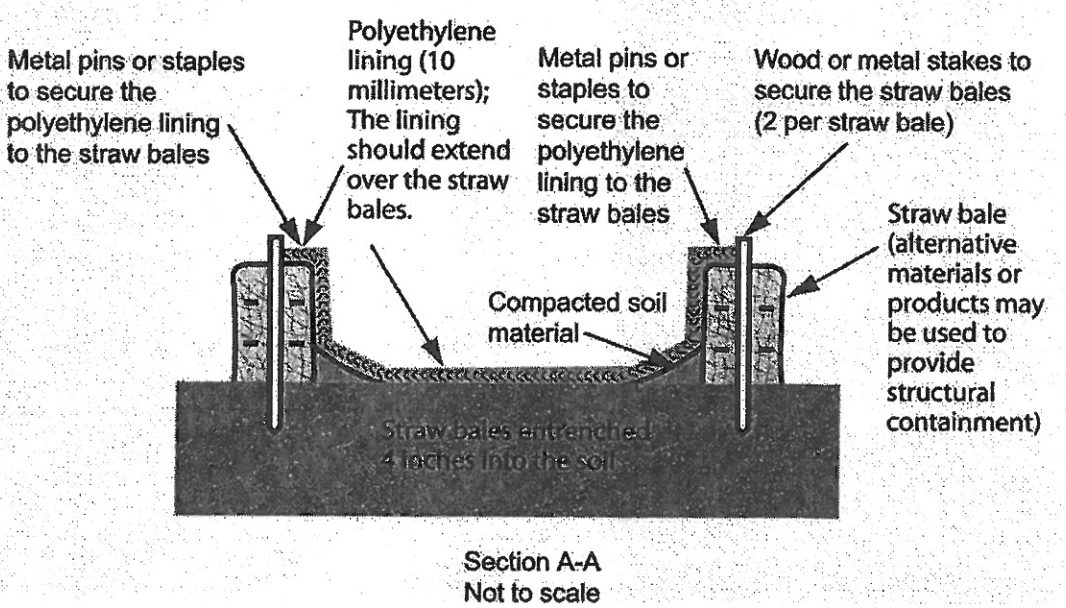
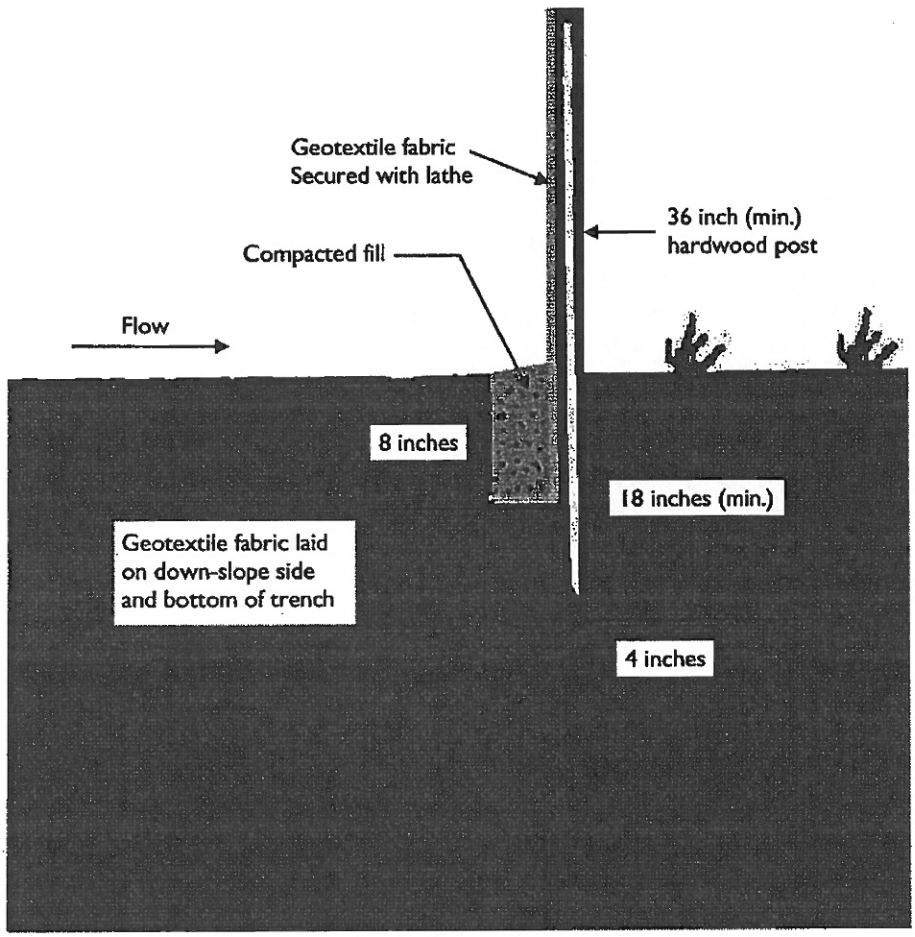
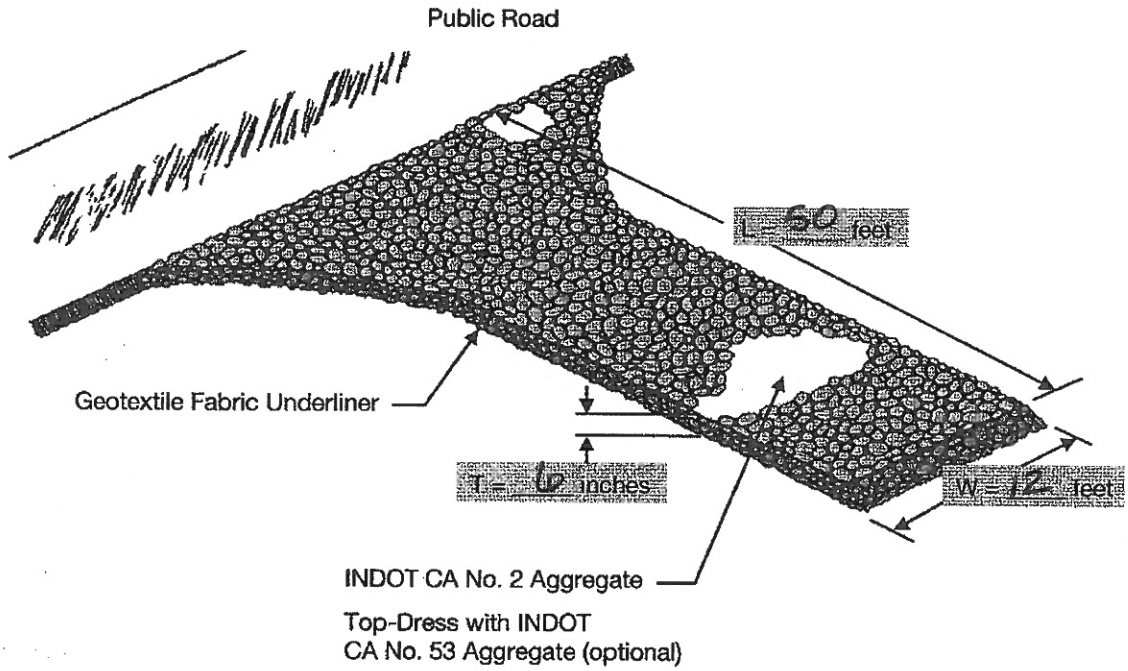


Exhibit 2


Geotextile fabric
Secured with lathe
36 inch (min.)
hardwood post
Compacted fill
Flow
8 inches
18 inches (min.)
Geotextile fabric laid
on down-slope side
and bottom of trench
4 inches

Temporary Construction Ingress/Egress Pad Plan View Worksheet (small sites less than two acres)



L = Ingress/Egress Pad Length

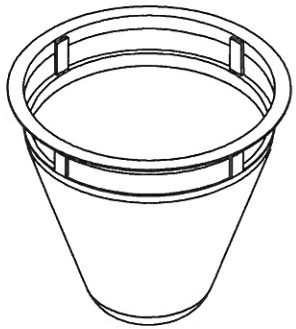
W = Ingress/Egress Pad Width

T = Aggregate Thickness

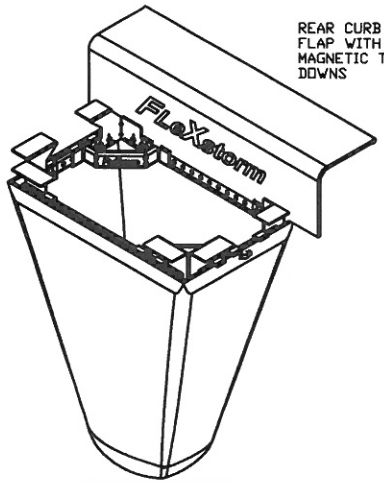
(Note: For minimum dimensions, see the "Specifications" section of this measure.)

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

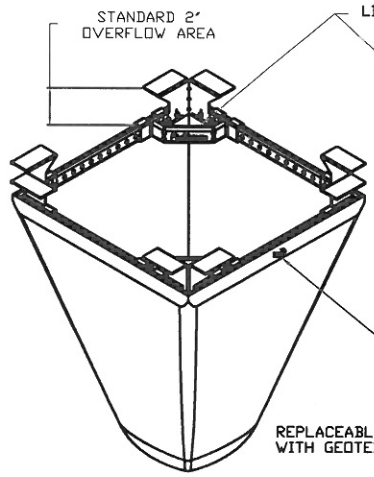
FLEXSTORM INLET FILTERS PRODUCT SELECTION AND SPECIFICATION DRAWING



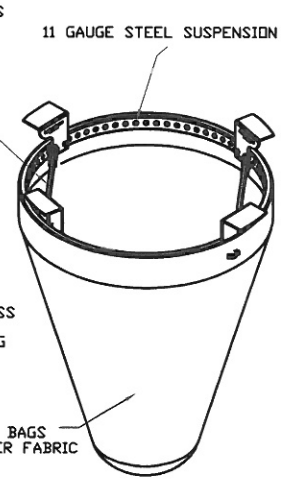
STAINLESS STEEL ROUND INLET FILTERS for NYLOPLAST CASTINGS
CATCH-ITS SPECIFIED W/ FX or FX-S BAGS



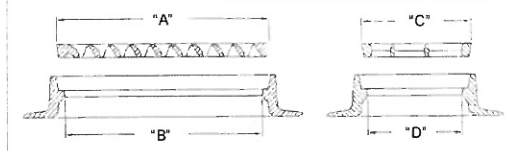
COMBINATION INLET FILTER FOR CURB HOODS

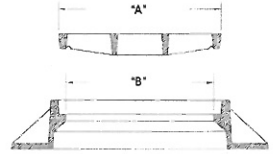


TYPICAL RECTANGULAR INLET FILTER



TYPICAL ROUND INLET FILTER



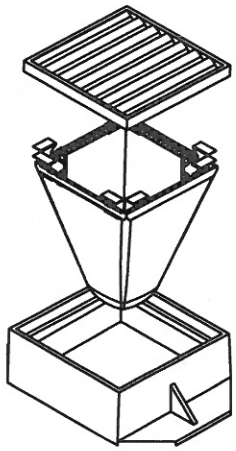


1. INDENTIFY YOUR FRAME STYLE, SIZE, AND MATERIAL

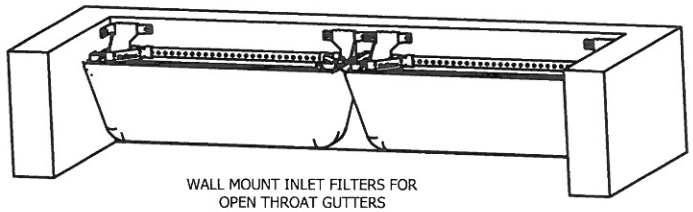
STYLE	*FRAME STYLE AND SIZE*	Frame P/N:
ROUND	Small Round (up to 20.0" dia grates (A) dim)	62SRD
	Med Round (20.1" - 26.0" dia grates (A) up to 25" dia openings (B))	62MRD
	Large Round (26.1" - 32.0" dia grates (A) up to 30" openings (B))	62LRD
	XL Round (32.1" dia - 39" dia grates (A) up to 37" dia openings (B))	62XLRD
RECT/ SQUARE	Small Rect / Square (up to 16" (B) x 16" (D) openings or 64" perimeter)	62SSQ
	Med Rect / Square (up to 24" (B) x 24" (D) openings or 96" perimeter)	62MSQ
	Large Rect / Square (up to 36" (B) x 24" (D) openings or 120" perimeter)	62LSQ
	XL Rect / Square (side by side 2 pc set to fit up to 48" (B) x 36" (D) openings)	62XLSQ
COMBO INLETS	Small Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62SCB
	Med Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62MCB
	Large Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62LCB
	XL Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62XLCB
NYLOPLAST	12" diameter Nyloplast castings (Stainless Steel Framing standard)	6212NY
	15" diameter Nyloplast castings (Stainless Steel Framing standard)	6215NY
	18"diameter Nyloplast castings (Stainless Steel Framing standard)	6218NY
	24" diameter Nyloplast castings (Stainless Steel Framing standard)	6224NY
	30" diameter Nyloplast castings (Stainless Steel Framing standard)	6230NY
WALL MOUNT	Open Throat Gutters - Curb Opening Size	
	Up to 4' (1 Filter and Mounting Hardware)	62WM1
	Between 4' and 8' (2 Filters and Mounting Hardware)	62WM2
	Between 8' and 12' (3 Filters and Mounting Hardware)	62WM3
	Between 12' and 16' (4 Filters and Mounting Hardware)	62WM4
UPGRADED FRAMING MATERIAL OPTIONS (STANDARD IS ZINC PLATED)		SUFFIX
CHROME PLATED FRAMING FOR HIGH SALT EXPOSURE		- CHR
STAINLESS STEEL FRAMING FOR HIGH SALT AND/OR CHEMICAL EXPOSURE		- SS

2. SELECT YOUR FILTER BAG PART NUMBER

FLEXSTORM FILTER BAGS	(22" depth) STD Bag P/N	(12" depth) Short Bag P/N	Clean Water Flow Rate (GPM/SqFt)	Min A.O.S. (US Sieve)
FX: Standard Woven Bag	FX	FX-S	200	40
FX+: Woven w/ MyCelx	FXP	FXP-S	200	40
FXO: Woven w/ Oil Boom	FXO	FXO-S	200	40
PC: Post Construction Bag	PC	PC-S	137	140
PC+: PC Bag w/ MyCelx	PCP	PCP-S	137	140
LL: Litter and Leaf Bag	LL	LL-S	High	3.5
IL: IDOT Non-Woven Bag	IL	IL-S	145	70



INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE



WALL MOUNT INLET FILTERS FOR OPEN THROAT GUTTERS

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE

Nominal Bag Size	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max FX (Woven)	PC (Post Constr)	IL (Non Woven)	* PC Oil Retent (Oz)	**PCP Oil Retent (Oz)
Small	1.6	1.2	0.8	0.9	66	155
Medium	2.1	1.8	1.2	1.3	96	185
Large	3.8	2.2	1.5	1.6	120	209
XL	4.2	3.6	2.4	2.6	192	370

* PC filter bag at 50% max adsorption capacity
** PC filter bag at 50% capacity and MyCelx skimmer at 100% capacity

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER

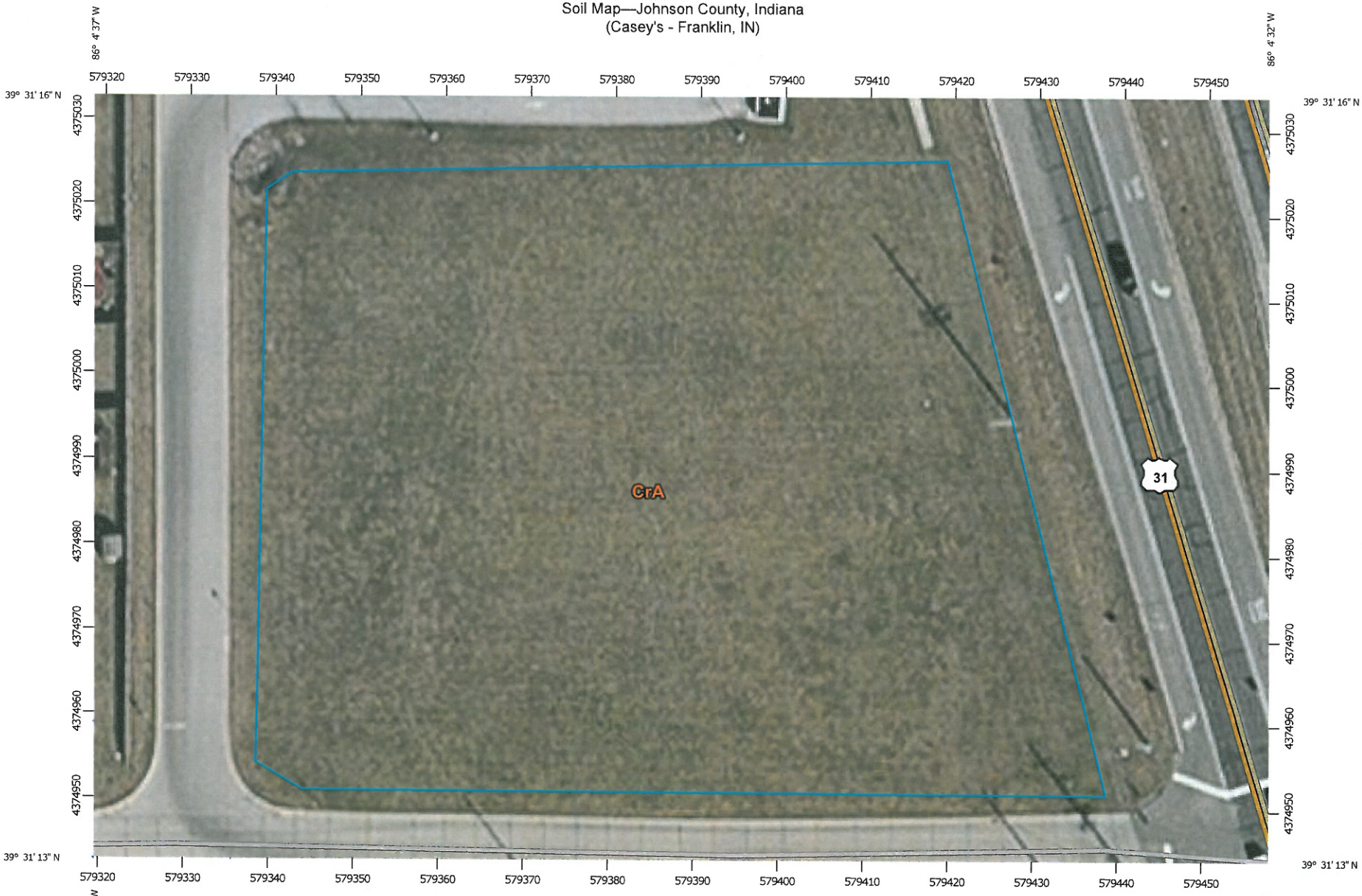
		-	
Frame P/N from Step 1.	Filter Bag P/N from Step 2.		Framing Material

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC
DISTRIBUTED BY ADS
WWW.INLETFILTERS.COM
(866) 287-8655 PH
(630) 355-3477 FX
INFO@INLETFILTERS.COM

SIZE		DWG NO	REV
C		FLEXSTORM_SPECS	
SCALE		SHEET 1 OF 1	

Appendix F

Soil Map—Johnson County, Indiana
(Casey's - Franklin, IN)



Map Scale: 1:633 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Johnson County, Indiana
Survey Area Data: Version 22, Sep 16, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

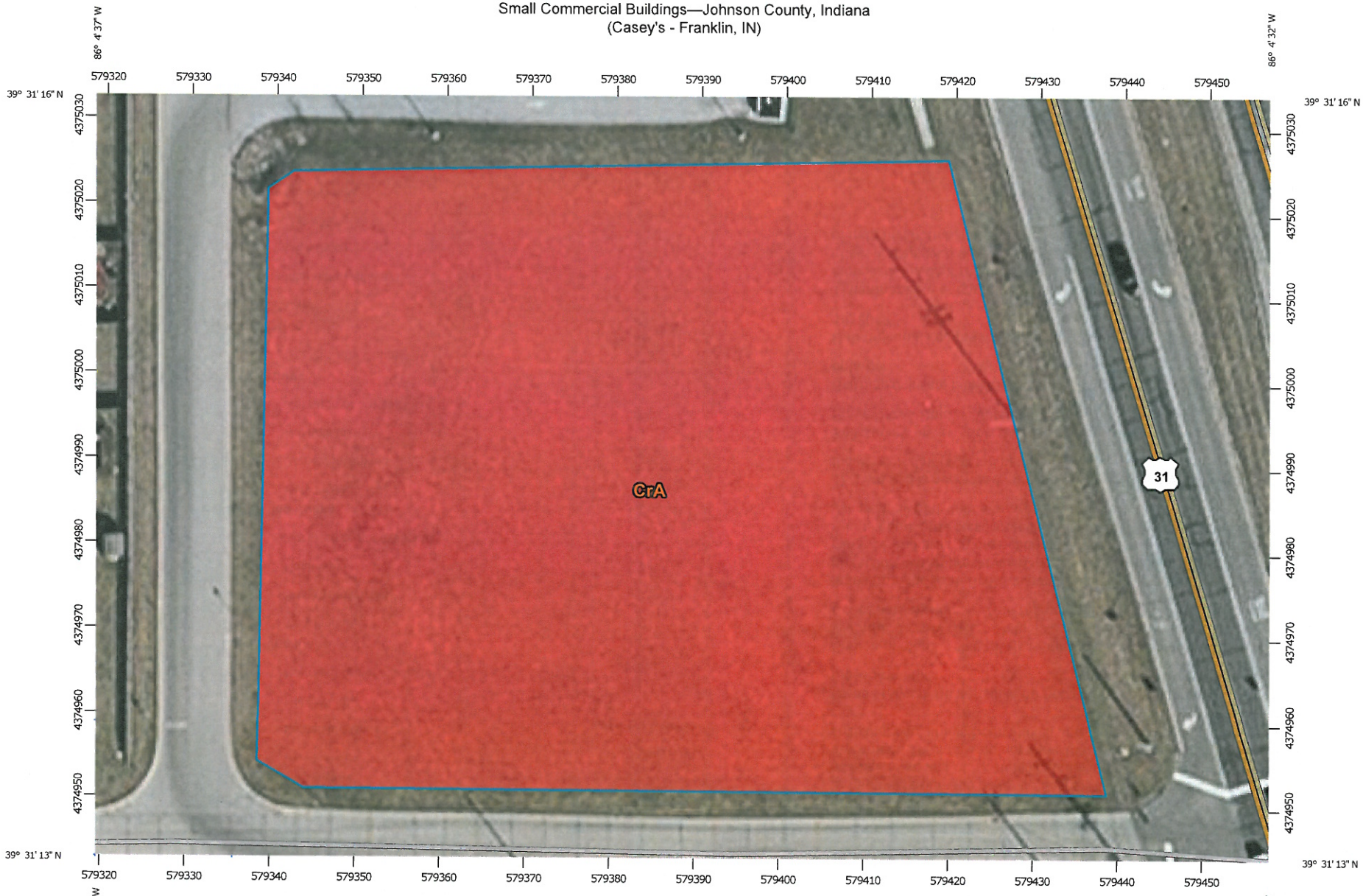
Date(s) aerial images were photographed: Sep 17, 2011—Mar 10, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Johnson County, Indiana (IN081)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CrA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	1.6	100.0%
Totals for Area of Interest		**1.6**	**100.0%**

Small Commercial Buildings—Johnson County, Indiana
(Casey's - Franklin, IN)



Map Scale: 1:633 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Johnson County, Indiana
Survey Area Data: Version 22, Sep 16, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 17, 2011—Mar 10, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Small Commercial Buildings

Small Commercial Buildings— Summary by Map Unit — Johnson County, Indiana (IN081)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
CrA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	Very limited	Crosby (93%)	Depth to saturated zone (1.00)	1.6	100.0%
			Treaty, drained (2%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (0.07)		
Totals for Area of Interest					**1.6**	**100.0%**

Small Commercial Buildings— Summary by Rating Value		
Rating	**Acres in AOI**	**Percent of AOI**
Very limited	1.6	100.0%
Totals for Area of Interest	**1.6**	**100.0%**

Description

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification of the soil). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

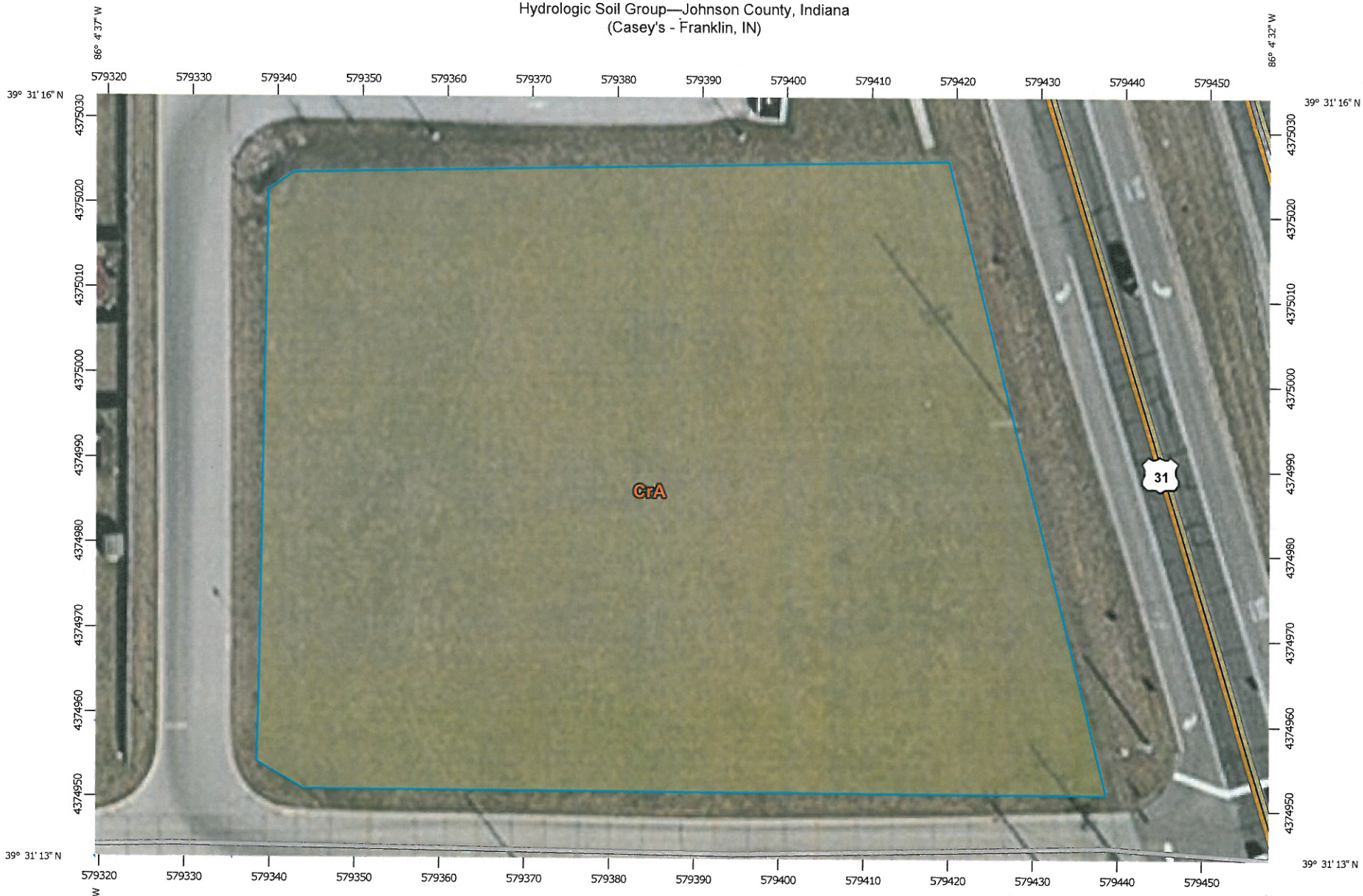
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Hydrologic Soil Group—Johnson County, Indiana
(Casey's - Franklin, IN)



Map Scale: 1:633 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Johnson County, Indiana
Survey Area Data: Version 22, Sep 16, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 17, 2011—Mar 10, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Johnson County, Indiana (IN081)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CrA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	C/D	1.6	100.0%
Totals for Area of Interest			**1.6**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

Appendix G

Storm Water Pollution Prevention Plan
Erosion Control Inspection Report

Date of Inspection: _____ Project: Casey's General Store – Franklin, IN

Name of Inspector: _____

Type of Inspection: Weekly ☐

After rain event ☐

Precip. Amount: _____

SITE CONDITIONS ON DAY OF INSPECTION

Erosion and Sediment Control:

Slopes:	Do all slopes where soil disturbing activities have taken place and not been permanently restored, have adequate temporary seeding or protection?	☐ Yes ☐ No
Ditches	Are all ditches existing, temporary, and/or proposed) clear of sediment and/or debris.	☐ Yes ☐ No
Perimeter Erosion Barrier:	Are all perimeter erosion barriers in good working order?	☐ Yes ☐ No
	Has perimeter barrier no longer needed been removed and the area restored?	☐ Yes ☐ No
Temporary Ditch Checks:	Are all temporary ditch checks in good working order?	☐ Yes ☐ No
	Are the current ditch checks adequate to control erosion?	☐ Yes ☐ No
Inlet Filters:	Are ALL inlet filters in good working order and less than 25% full?	☐ Yes ☐ No
Outfalls:	Are all outfalls free of any signs of sediment discharge?	☐ Yes ☐ No
Areas of Interest – Wetland/Prairie/Tree Preservation:		
	Has the contractor remained clear of all designated "no entry" areas?	☐ Yes ☐ No
	Are all "no intrusion" areas adequately marked to prevent accidental entry?	☐ Yes ☐ No
Stock Piles:	Are all stockpiles properly maintained to prevent runoff and protected to minimize spread in case of erosion?	☐ Yes ☐ No
Borrow/Waste Sites:	Are all borrow and waste locations, including those which are offsite, in compliance with all NPDES rules and regulations?	☐ Yes ☐ No

General Site Maintenance

Concrete Washout Areas: Are concrete washout areas adequately maintained? ☐ Yes ☐ No
Has all washout occurred only at designated washout locations? ☐ Yes ☐ No

Staging/Storage Areas: Are all staging/storage facilities free of litter, leaking containers, leaking equipment, spills, etc? ☐ Yes ☐ No

Vehicle Tracking: Is the site free from mud, sediment and debris from the vehicles entering/leaving off road areas throughout the site? ☐ Yes ☐ No

Fuel/Chemical Storage Locations: Are all designated fueling locations free of evidence of leaks and or spills? ☐ Yes ☐ No

Update SWPPP: Have all changes to the projects SWPPP been noted on the graphic site plan? ☐ Yes ☐ No

Specific Instructions Related to "No" Answers From Above:

Station or Station to Station	Practice	Comments/Actions Required	Time for Repair

Other Comments:

_____

_____

_____

_____

_____

_____

_____

Additional Pages (Attached As Needed)

Inspector's Signature _____ Date: _____

Contractor's Signature _____ Date: _____

Appendix H

SPILL REPORT FORM

Location:	
Date:	Time:
Regulatory Agencies Notified (date, time, person, agency and how):	
Material Spilled:	
Quantity Spilled:	
Source:	
Cause:	
Extent of Injuries (if any):	
Adverse Environmental Impact (if any):	
Immediate remedial actions taken at time of spill:	
Measures taken to prevent recurrence:	
Additional Comments:	
This Report Prepared By:	_____ Signature

Appendix I

RULE 5 – NOTICE OF TERMINATION (NOT)

State Form 51514 (R2 / 4-10)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER QUALITY

For questions regarding the requirements for project termination or completion of this form, contact:

Indiana Department of Environmental Management
Storm Water, Permits Coordinator
100 North Senate Avenue
MC 65-42, Room 1255
Indianapolis, Indiana 46204-2251
Telephone (317) 233-1864 or
(800) 451-6027(*within Indiana*), ext. 31864
Web Access: http://www.IN.gov/idem/4902.htm

Note: Submission of this Notice of Termination letter is a certification by the project site owner that the project meets the terms and conditions of the General Permit Rule 327 IAC 15-5 (Rule 5, Storm Water Discharges Associated with Construction Activity) for termination of permit coverage under the National Pollutant Discharge Elimination System (NPDES).

PROJECT NAME AND LOCATION

Permit number
(Note: Permit numbers were assigned to projects beginning in November of 2003. Therefore, a permit number is only applicable for those projects that began or were renewed on or after November of 2003).

Project name *(Note: Provide the project name as it appears on the active "Notice of Intent")*			**County**
Company name			
Project site owner's name (*an individual*)			
Address (*number and street*)			
City		**State**	**ZIP code**
Telephone	**FAX**	**E-mail address** (*if available*)	

THIS "NOTICE OF TERMINATION" IS BEING SUBMITTED FOR THE FOLLOWING

To be eligible for termination, specific criteria must be met. There are three options for which a project may be considered for termination. These options include:

- Option # 1 Certification for change of ownership;
- Option # 2 Certification for termination of construction activities *(327 IAC 15-8)*; and,
- Option # 3 Notice of termination to obtain early release from compliance with 327 IAC 15-5 (327 IAC 15-8).

Select one of the three options that apply to "Permit Termination" by checking the appropriate box, complete all information associated with that option, include required attachments (where applicable), and complete the "Project Site Owner Responsibility Statement" on page 2 of this form.

☐ **Option # 1 Certification for change of ownership**

This option does not apply to the sale of individual lots within the permitted acreage; only the sale of the entire project site as originally permitted. The agency may accept termination for entire sections or phases of a project that are sold. To determine if a project is eligible, please contact the IDEM Storm Water Permits Coordinator.

By signing this "Notice of Termination" , I certify the following:

A. **The project was sold**; I am no longer the project site owner as was designated in my "Notice of Intent". The new owner of the project site is:

Company name (*If applicable*)

Project site owner's name (*An individual*)

Address (*number and street*)

City **State** **ZIP code**

Telephone number **FAX** **E-mail Address** (*If available*)

B. I have notified the new project site owner of his/her responsibilities to comply with 327 IAC 15-5 and the requirements associated with the rule including filing a new "Notice of Intent."

☐ **Option # 2 Certification for termination of construction activities**

By signing this "Notice of Termination", I certify the following:

A. All land disturbing activities, including construction on all building lots, have been completed and the entire site has been stabilized;
B. All temporary erosion and sediment control measures have been removed; and
C. No future land disturbing activities will occur at the project site.

(Continued on reverse side)

☐ **Option # 3 "Notice of Termination" to obtain early release from compliance with 327 IAC 15-5**

By signing this "Notice of Termination," I certify the following:

A. The remaining, undeveloped acreage does not exceed five (5) acres, with contiguous areas not to exceed one (1) acre.
B. A map of the project site, clearly identifying all remaining undeveloped lots, is attached to this letter. The map must be accompanied by a list of names and addresses of individual lot owners or individual lot operators of all undeveloped lots.
C. All public and common improvements, including infrastructure, have been completed and permanently stabilized and have been transferred to the appropriate local entity.
D. The remaining acreage does not pose a significant threat to the integrity of the infrastructure, adjacent properties, or water quality.
E. All permanent storm water quality measures have been implemented and are operational.

Upon written notification to the department the project site owner certifies that he/she will:

A. Notify all current individual lot owners and all subsequent lot owners of the remaining undeveloped acreage and acreage with construction activity that they are responsible for complying with section 7.5 of 327 IAC 15-5. The notice must inform the individual lot owners of the requirements to:
(1) install and maintain appropriate measures to prevent sediment from leaving the individual building lot; and
(2) maintain all erosion and sediment control measures that are to remain on-site as part of the construction plan.

PROJECT SITE OWNER RESPONSIBILITY STATEMENT

By signing this "Notice of Termination" letter, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed name of project site owner _____

Signature of project site owner _____ **Date** _____

This "Notice of Termination" must be signed by an individual meeting the signatory requirements in 327 IAC 15-4-3(g).

SUBMITTAL OF THE "NOTICE OF TERMINATION"

Please submit the completed "Notice of Termination" to the Indiana Department of Environmental Management (IDEM). A copy of the "Notice of Termination" is required to also be submitted to the Soil and Water Conservation District (SWCD) or a Municipal Separate Storm Sewer System (MS4). The appropriate entity will typically be the agency that reviewed the construction/storm water pollution prevention plan associated with the project. The "Notice of Termination" shall be mailed to the IDEM at

Indiana Department of Environmental Management
Storm Water Permits Coordinator
100 North Senate Avenue
Mail Code 65-42,Room 1255
Indianapolis, IN 46204-2251

Additional considerations

It is not required by 327 IAC 15-5 that the termination is verified prior to submittal, however the SWCD or MS4, as the plan review agency, may elect to field verify project completion prior to the "Notice of Termination" submittal. Several MS4s require (by local ordinance) approval of all terminations prior to submitting the "Notice of Termination" to IDEM. Failure to submit this document to an MS4 that has adopted this provision may be a violation of the local MS4 ordinance.

If the agency participates, submit the completed Notice of Termination form to the SWCD or MS4. The request for termination will be reviewed for concurrence and either returned to the project site owner for submittal to IDEM or forwarded to IDEM on behalf of the project site owner.

FOR AGENCY USE ONLY (FIELD VERIFICATION OF TERMINATION)

The SWCD, an MS4 entity, or the Indiana Department of Environmental Management may inspect the project site to evaluate the adequacy of the remaining storm water quality measures and compliance with the Notice of Termination (NOT) requirements. If the inspecting entity finds that the project site owner has meet the requirements of 327 IAC 15-5-8, the entity may elect to sign off on the project. It is the responsibility of the project site owner to file the NOT with the Indiana Department of Environmental Management.

☐ **Accepted** The site referenced above has been inspected and it has been determined that the request to terminate this project is compliant with the requirements of 327 IAC 15-5. This form must be submitted to the IDEM for final processing.

☐ **Denied** The site referenced above has been inspected and it has been determined that the request to terminate this project is not compliant with the requirements of 327 IAC 15-5. Continue to implement the Storm Water Pollution Prevention Plan and take appropriate measures to minimize the discharge of pollutants.

Signature	**Printed name**	**Agency**	**Date** (*month, day , year*)

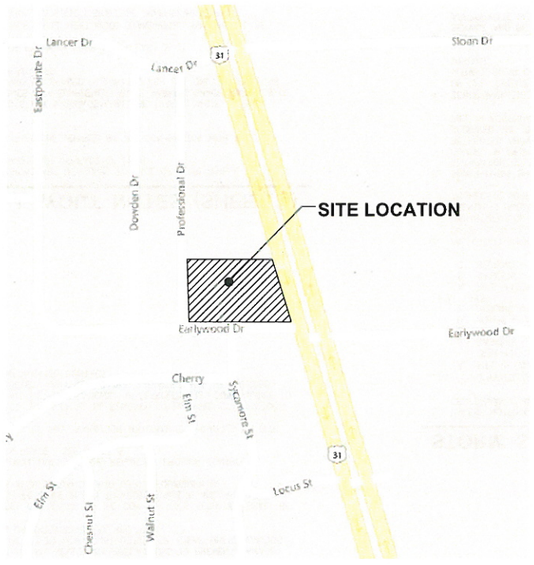
Appendix J

CASEY'S General Store

PROPOSED SITE AT
FRANKLIN, INDIANA

LEGAL DESCRIPTION

LOT NUMBERED 1 IN NORTHPOINTE COMMERCIAL SUBDIVISION, SECTION ONE, AN ADDITION TO THE CITY OF FRANKLIN AS RECORDED IN PLAT CABINET D, PAGES 423 A & B, AND LAND SURVEYOR'S CORRECTION FOR SCRIVENER'S ERROR AS RECORDED OCTOBER 28, 2002, AS INSTRUMENT #2002-035915, AND LAND SURVEYOR'S CORRECTION FOR SCRIVENER'S ERROR RECORDED NOVEMBER 01, 2002, AS INSTRUMENT NUMBER 2002-036753 IN THE OFFICE OF THE RECORDER OF JOHNSON COUNTY, INDIANA.



N.T.S.

VICINITY MAP

INDEX TO SHEETS

SHEET NO.	SHEET NAME	ISSUE DATE	REVISION DATE
1.	COVER SHEET	10-28-15	
2.	GENERAL NOTES & LEGENDS	10-28-15	
3.	EXISTING TOPOGRAPHY & DEMOLITION PLAN	10-28-15	
4.	LAYOUT PLAN	10-28-15	
5.	GRADING & EROSION CONTROL PLAN	10-28-15	
6.	UTILITY PLAN	10-28-15	
7.	SANITARY & STORM SEWER DETAILS	10-28-15	
8.	STORM SEWER DETAILS	10-28-15	
9.	STANDARD SITE DETAILS	10-28-15	
10.	STANDARD SITE DETAILS	10-28-15	
11.	EROSION CONTROL & MISC. DETAILS	10-28-15	
12.	LANDSCAPE PLAN	10-28-15	
13.	LANDSCAPE DETAILS & NOTES	10-28-15	

EXISTING UTILITIES

CITY OF FRANKLIN:
JOE MCGUINNESS, MAYOR
PH. 877-736-3602

KRISTA LINKE,
COMMUNITY DEVELOPMENT DIRECTOR
PH. 877-736-3631
70 E. MONROE STREET
FRANKLIN, IN 46131

CITY OF FRANKLIN PLANNING AND ENGINEERING DEPT.:
TRAVIS UNDERHILL, CITY ENGR.
Ph. 877-736-3631

JOANNA MYERS, SENIOR PLANNER
PH. 877-736-3631
70 E. MONROE STREET
FRANKLIN, IN 46131
PH. 877-736-3631

PUBLIC WORKS DEPT.:
RICK LITTLETON,
SUPERINTENDENT
796 S. STATE STREET
FRANKLIN, IN 46131
PH. 888-736-3640

GAS:
BOB ROGGE
VECTREN
600 INDUSTRIAL DR.
FRANKLIN, IN 46131
PH. 800-227-1376

PHONE / CABLE SERVICE:
FRONTIER COMMUNICATIONS
PH. 812-522-7871

WATER:
INDIANA AMERICAN WATER
2501 ENDRESS PLACE
GREENWOOD, IN 46143
PH. 317-881-0270

ELECTRIC:
DUKE ENERGY
2515 N. MORTON STREET
FRANKLIN, IN 46131
PH. 317-736-2031

INDIANA DEPARTMENT OF TRANSPORTATION
SEYMOUR DISTRICT OFFICE
ANTHONY MCCLELLAN
185 AGRICO LANE
SEYMOUR, IN 47274
PH. 877-305-7611

SANITARY SEWER
CITY OF FRANKLIN WASTE WATER TREATMENT PLANT
706 S. STATE STREET
FRANKLIN, IN 56131
PH. 888-736-3640

BENCHMARKS

ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS ESTABLISHED FROM A GPS OBSERVATION.

BM# 104: SET RAILROAD SPIKE IN SECOND UTILITY POLE WEST OF US 31 ON SOUTH SIDE OF EARLYWOOD DR., ELEVATION = 777.37 FEET.

BM# 103: SET RAILROAD SPIKE IN FIRST UTILITY POLE NORTH OF EARLYWOOD DRIVE ON WEST SIDE OF US 31, ELEVATION = 778.11 FEET.

BM# 106: SET CHISELED SQUARE ON EAST MOST LIGHT POLE BASE ON SOUTH SIDE OF CARWASH PROPERTY, BEING ON LOT 2 OF NORTHPOINTE COMMERCIAL SUBDIVISION, SECTION ONE, ELEVATION = 777.62 FEET.

PREPARED BY:

FARNSWORTH GROUP, INC.
2211 WEST BRADLEY AVENUE
CHAMPAIGN, IL 61821

PATRICK J. MOONE REGISTERED PE11012297 STATE OF INDIANA PROFESSIONAL ENGINEER

10/28/15
DATE:

PATRICK J. MOONE
INDIANA PROFESSIONAL ENGINEER NO. 11012297
EXPIRES 07/31/16

DEVELOPER:

CASEY'S MARKETING COMPANY
ONE CONVENIENCE BOULEVARD
P.O. BOX 3001
ANKENY, IOWA 50021
515-965-6100

Farnsworth GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
D/B/A FARNSWORTH ENGINEERING GROUP, INCORPORATED
www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:

#	Date:	Description:

PROJECT:

CASEY'S
MARKETING COMPANY

CITY OF FRANKLIN
JOHNSON CO., INDIANA

Date:	10-28-15
Design/Drawn:	GAB
Reviewed:	PJM
Book No.: - Field:	-

SHEET TITLE:

COVER

SHEET NUMBER:

1
of 13

Project No.: 151019.02

EXISTING LEGEND

- IRON ROD FOUND WITH CAP STAMPED "LS NO. 1880"
- RAILROAD SPIKE
- IRON PIPE
- EX — EXISTING
- CURB INLET
- STORM INLET
- SANITARY MANHOLE
- WATER VALVE
- YH — YARD HYDRANT
- FIRE HYDRANT
- WATER METER
- GAS METER
- UNDERGROUND TELEPHONE PEDESTAL
- UTILITY POLE
- ELECTRIC METER
- DOWN GUY
- WC — WITNESS CORNER
- 15"ST — STORM SEWER / SIZE
- 10"SA — SANITARY SEWER / SIZE
- W — WATER LINE
- G — GAS LINE
- OT — OVERHEAD COMMUNICATION LINE
- OE — OVERHEAD ELECTRIC LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- X — FENCE
- GUARD RAILING
- EVERGREEN TREE
- SIGN
- GAS MARKER
- AC — AIR CONDITIONING UNIT
- BUILDING
- 748.89 — SPOT ELEVATION
- N89°44'59"W 299.38'(R) — RECORD DATA
- N00°34'46"W 121.91' — MEASURED DATA

DEMOLITION LEGEND

- CONCRETE REMOVAL
- ASPHALT PAVEMENT REMOVAL
- GRAVEL PAVEMENT REMOVAL
- ASPHALT PAVEMENT 1-1/2" MILL FOR NEW PAVEMENT
- CURB REMOVAL
- STRUCTURE REMOVAL
- G — GAS SERVICE REMOVAL
- T — TELEPHONE LINE REMOVAL
- OT — OVERHEAD TELEPHONE LINE REMOVAL
- OE — OVERHEAD ELECTRIC LINE REMOVAL
- T — TELEPHONE LINE RELOCATION
- OE — OVERHEAD ELECTRIC LINE RELOCATION
- X — ORANGE CONSTRUCTION FENCING
- DECIDUOUS TREE REMOVAL
- 20" NON-DECIDUOUS TREE REMOVAL
- BUSH REMOVAL

PROPOSED LEGEND

- W — WATER METER PIT W/ METER
- W — WATER SERVICE
- 6"SA — SANITARY SERVICE
- 8"ST — STORM SEWER
- G — GAS SERVICE
- E — ELECTRIC CONDUITS
- END SECTION
- STORM INLET
- CURB INLET
- STORM MANHOLE
- SANITARY MANHOLE
- SEWER CLEAN OUT
- CONCRETE MONOLITHIC CURB & GUTTER
- COMBINED CONCRETE CURB & GUTTER (PUBLIC STREET) PER LOCAL SPECIFICATIONS
- DEPRESSED CURB
- SIDEWALK, 4" P.C. OR TYPE SPECIAL
- STANDARD PAVEMENT: 6" P.C. CONCRETE, SAW CUT AT 15' MAX. INTERVALS; 12" AGGREGATE BASE COURSE, TY. B
- HEAVY DUTY DRIVEWAY: 9" P.C. CONC.; 6" COMPACTED AGGREGATE BASE #53
- HEAVY-PAVEMENT ON SITE: 7" P.C. CONC. W/#4 REINF. BARS @ 24" CTRS EACH WAY OVER 12" COMPACTED AGGREGATE BASE #53
- PAVEMENT REPAIR FOR UTILITY CONNECTION
- EROSION CONTROL BLANKET
- SITE LIGHTING
- 632 — GROUND CONTOUR
- SF — SILT FENCE
- DD — DIVERSION DIKE
- F — INLET PROTECTION
- DRAINAGE DIRECTION
- ACCESSIBLE PATH DETECTABLE WARNING STRIP
- BOLLARD
- 473.43SW x — FINISHED TOP OF WALK ELEV.
- 472.93P x / 472.00 x — FINISHED PAVEMENT ELEV.
- CHECK DAM

PROJECT SPECIFICATIONS AND STANDARDS

SITE CONSTRUCTION FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS ACCOMPANYING THESE PLANS AND THE FOLLOWING SPECIFICATIONS:

A. "INDOT STANDARD SPECIFICATIONS BOOK", CURRENT EDITION.
B. "INDIANA STORM WATER QUALITY MANUAL", CURRENT EDITION.
C. "INDIANA DRAINAGE HANDBOOK", CURRENT EDITION.
D. "INDIANA ACCESSIBILITY CODE"
E. CITY OF FRANKLIN LATEST STANDARDS & SPECIFICATIONS.
F. CASEY'S GENERAL STORE SPECIFICATIONS, LATEST VERSION.

DEMOLITION NOTES (SHEET 3)

1. THE EXISTING TOPOGRAPHIC INFORMATION INDICATED FOR THIS PROJECT IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY FARNSWORTH GROUP, INC. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE TOPOGRAPHIC INFORMATION INDICATED ON THE DRAWINGS AND SHALL DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING TOPOGRAPHIC INFORMATION ABOVE OR BELOW GROUND, SHOWN OR NOT SHOWN, PRIOR TO CONSTRUCTION. DISCREPANCIES IN EXISTING TOPOGRAPHIC DATA SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY FOR REVIEW.
2. CONTRACTOR SHALL NOTIFY AND COORDINATE UTILITY ABANDONMENTS AND RELOCATIONS WITH APPROPRIATE UTILITY COMPANY AFFECTED AS MAY BE NECESSARY. SEE COVER SHEET FOR CONTACT LISTINGS OF LOCAL UTILITIES.
3. CALL BEFORE YOU DIG INDIANA 811. CONTACT 1-800-382-5544 BEFORE YOU BEGIN CONSTRUCTION OPERATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY PROVIDERS AND HAVING ALL UNDERGROUND UTILITIES PROPERLY LOCATED PRIOR TO ANY DEMOLITION.
5. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR. DUE TO THE AGE OF THE SITE, UNKNOWN UTILITIES MAY BE DISCOVERED AND SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY.
6. CONTRACTOR SHALL REMOVE ALL EXISTING UTILITIES INDICATED WITHIN THE PROPOSED BUILDING FOOTPRINTS, AND BACKFILL WITH APPROVED GRANULAR MATERIAL.
7. CONTRACTOR SHALL COMPLY WITH ALL UTILITY PROVIDER REQUIREMENTS WHEN DISCONNECTING EXISTING UTILITY SERVICE FROM BUILDINGS TO BE REMOVED.
8. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO OTHER AREAS ADJACENT TO NEW CONSTRUCTION OR AREAS WHERE VARIOUS SYSTEM CONNECTIONS OR EXTENSIONS ARE REQUIRED.
9. TEMPORARY BARRICADES PERTAINING TO THE CONTRACTOR'S ACTIVITIES SHALL BE INSTALLED TO PREVENT POSSIBLE INJURY TO PEDESTRIANS IN AND AROUND CONSTRUCTION AREAS IN ACCORDANCE WITH OSHA REQUIREMENTS.
10. PRIOR TO ANY DEMOLITION TAKING PLACE, PERIMETER EROSION CONTROL MEASURES MUST BE IN PLACE. SEE SHEET 5.
11. NO BURNING OR BURYING OF ANY DEMOLITION MATERIAL IS PERMITTED ON SITE.
12. UNDERGROUND STORAGE TANKS SHALL BE REMOVED BY LICENSED CONTRACTORS IN COMPLIANCE WITH ALL UST REGULATIONS. IF PETROLEUM IS FOUND NOTICE TO IDEM SHALL BE CONDUCTED. ANY REMEDIATION EFFORTS SHALL BE HANDLED UNDER A SEPARATE NEGOTIATED CONTACT.

STANDARD LAYOUT NOTES (SHEET 4)

1. ALL PAVEMENT DIMENSIONS ARE MEASURED TO FACE OF CURB. WHERE APPLICABLE, COORDINATES ARE TO FACE OF CURB.
2. BUILDING DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR WITH THE ARCHITECT'S PLANS.
3. STANDARD – PARKING SPACE MARKINGS SHALL BE TRAFFIC WHITE.
   OPTION – BLUE LINES MAY SUPPLEMENT WHITE PARKING SPACE MARKINGS OF EACH PARKING SPACED DESIGNATED FOR USE ONLY BY PERSONS WITH DISABILITIES.
4. TRANSITION TO CITY OF FRANKLIN CURB WITHIN LAST 5'.
5. ALL PAVEMENT MARKINGS SHALL MEET INDOT STANDARDS. PAVEMENT LANE MARKINGS (4") AND STOP BARS (12") SHALL BE TRAFFIC WHITE PAINT.
6. ALL PUBLIC/PRIVATE WALKWAYS SHALL NOT EXCEED 2% CROSS SLOPE. ANY WALK CONSTRUCTED WITH A CROSS SLOPE GREATER THAN 2% SHALL BE REMOVED AND REPLACED AT CONTRACTORS EXPENSE.
7. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION, NOR SAFETY ON THE JOB SITE, NOR SHALL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. NEITHER THE PROFESSIONAL ACTIVITIES OF THE ENGINEER NOR THE PRESENCE OF THE ENGINEER AT A CONSTRUCTION SITE SHALL RELIEVE THE CONTRACTOR OF THEIR OBLIGATIONS, DUTIES, AND RESPONSIBILITIES INCLUDING ANY HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES.

UTILITY NOTES (SHEET 6)

1. COORDINATE THE ELECTRIC SERVICE CONNECTION POINT ON MAIN WITH DUKE ENERGY.
2. COORDINATE THE TELEPHONE SERVICE CONNECTION POINT ON MAIN WITH FRONTIER COMMUNICATIONS.
3. COORDINATE THE GAS SERVICE CONNECTION POINT ON ON WITH VECTREN.
4. ALL CLEAN-OUTS (SANITARY AND STORM), THAT ARE BUILT IN CONCRETE PAVEMENT AREAS, SHALL BE R-1976.
5. A STANDARD 1,000 GALLON GREASE TRAP IS REQUIRED FOR THIS PROJECT. REFER TO THE ARCHITECTURAL PLUMBING PLAN, P-501, FOR ADDITIONAL INFORMATION.

GRADING & EROSION CONTROL NOTES (SHEET 5)

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES AND HAVING ALL UNDERGROUND UTILITIES LOCATED PRIOR TO ANY CONSTRUCTION.
2. ALL FILL AREAS SHALL BE STRIPPED OF ALL TOPSOIL PRIOR TO PLACING EMBANKMENT MATERIAL. LAWN AREAS THAT HAVE RECEIVED EMBANKMENT MATERIAL SHALL RECEIVE AT LEAST 6" OF TOPSOIL AS THE FINAL COURSE OF FILL IN PREPARATION FOR SEEDING OPERATIONS. ALL LAWN AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED AND RESTORED TO THE SATISFACTION OF THE OWNER.
3. EMBANKMENT MATERIAL SHALL BE PLACED IN NO MORE THAN 8" LIFTS AND SHALL BE COMPACTED IN ACCORDANCE WITH CASEY'S GENERAL STORE SPECIFICATIONS.
4. TEMPORARY SILTATION PROTECTION SHALL BE CONSTRUCTED AS SILT FILTER BASKETS IN ALL EXISTING AND PROPOSED INLETS AND MANHOLES AND SILT FILTER FENCE WHERE INDICATED ON THE PLANS TO PROTECT FROM SILTATION ONTO ADJACENT PROPERTY AND ROADWAYS.
5. PERMANENT STABILIZATION SHALL INCLUDE THE SEEDING OR SODDING OF LAWN AREAS DISTURBED AND PAVED SURFACE COURSE FOR ROADWAYS AND PARKING. ALL PERMANENT SEEDING SHALL TAKE PLACE IMMEDIATELY FOLLOWING FINAL GRADING OPERATIONS IN ANY COMPLETED AREA WITHIN THE CONSTRUCTION LIMITS.
6. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL TRASH AND CONSTRUCTION DEBRIS WILL BE HAULED TO THE LOCAL MUNICIPAL DUMP AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL SOLID WASTE MANAGEMENT REGULATIONS.
7. THE CONTRACTOR SHALL PROVIDE SOLID WASTE COLLECTION DURING CONSTRUCTION TO MINIMIZE POLLUTION.
8. ROOF DRAINS FROM THE FUEL ISLAND CANOPY SHALL TIE DIRECTLY INTO THE UNDERGROUND DETENTION STRUCTURE. THE ROOF DRAIN CONNECTION SHALL BE PER THE DETENTION STRUCTURE MANUFACTURER'S REQUIREMENTS.
9. ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. THE OWNER WILL BE RESPONSIBLE FOR MAINTAINING THESE PROCEDURES DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE DETAIL INCLUDED WITH THESE PLANS AT LOCATIONS INDICATED ON THE PLANS TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. ANY EXCESS MUD, DIRT OR ROCK TRACKED ONTO EXISTING STREETS WILL BE CHECKED FOR DAILY AND REMOVED AS NECESSARY.
11. PERMANENT GROUND COVER SHALL BE IN ACCORDANCE WITH THE INDOT STANDARD SPECIFICATIONS BOOK.
12. THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES AND THE STORM WATER POLLUTION PREVENTION PLAN PREPARED FOR THIS PROJECT AND AVAILABLE FROM OWNER.
13. ADDITIONAL EROSION CONTROL REQUIREMENTS ARE INDICATED IN THE STORM WATER POLLUTION PREVENTION PLAN PREPARED FOR THIS PROJECT.
14. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED ON THE FIRST DAY OF CONSTRUCTION ACTIVITIES. ALL BARE SOIL SURFACES NOT IN MAJOR CONSTRUCTION AREAS SHALL BE TEMPORARILY SEEDED WITHIN 7 DAYS, WEATHER AND SOIL CONDITIONS PERMITTING. THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL SYSTEM WEEKLY, AND AFTER RAINFALL EVENTS. DEFICIENCIES SHALL BE NOTED AND CORRECTED IMMEDIATELY.
15. AREAS HAVING SLOPES OF 4:1 OR GREATER SHALL BE STABILIZED IN ACCORDANCE WITH ONE OF THE FOLLOWING TWO METHODS:
    A. SODDING
    B. EROSION CONTROL BLANKET SHALL BE 100% STRAW WITH LIGHTWEIGHT PHOTODEGRADABLE POLYPROPYLENE THREAD WITH STITCHING 1.5 INCHES ON CENTER. MATERIAL SHALL MEET FHWA FP-03 CATEGORIES, TYPE 2.C SHORT-TERM (UP TO 12 MONTHS) EQUAL TO S75 AS MANUFACTURED BY NORTH AMERICAN GREEN, EVANSVILLE, INDIANA OR APPROVED EQUAL. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
16. ALL CATCH BASIN GRATES SHALL BE BICYCLE / PEDESTRIAN SAFE.
17. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE MAINTAINED IN SERVICE AND BE REPLACED WITH HDPE OR PVC PIPE STORM SEWER OF APPROPRIATE SIZE AND SLOPE.
18. POTABLE TOILETS, IF USED ON SITE, MUST BE SECURED TO THE GROUND AND MUST BE AT LEAST 50 FEET FROM ANY WATER BODY OR STORM CONVEYANCE SYSTEM.

STORM SEWER NOTES (SHEET 6)

1. UNLESS NOTED OTHERWISE, ALL STORM SEWER & SERVICES SHALL BE IN CONFORMANCE WITH THE FOLLOWING:
   1.1. POLYVINYL CHLORIDE (PVC) PIPE
   A. PIPE & FITTING MATERIAL – POLYVINYL CHLORIDE (PVC) PIPE: ASTM D3034 (SDR-PR) NSF 14. MINIMUM SDR RATING 26.
   B. GASKETS – FLEXIBLE ELASTOMERIC, ASTM F477
   C. FITTINGS – PVC SDR 18 EXTRA HEAVY BY HARCO. ASTM D3034
   D. JOINTS – ASTM D3212
   E. BEDDING – CLASS II, ASTM 2321
   1.2. RCP
   A. PIPE MATERIAL – REINFORCED CONCRETE PIPE
   B. GASKETS – FLEXIBLE RUBBER OR BITUMINOUS MASTIC
   C. BEDDING – CLASS C, ASTM C12.
2. ALL UTILITY MAIN AND SERVICE TRENCHES SHALL BE BACKFILLED WITH GRANULAR MATERIAL IN ACCORDANCE WITH THE CURRENT EDITION OF THE "INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS BOOK" WHERE THE TRENCH IS UNDER OR WITHIN 2 FEET OF EXISTING OR PROPOSED, SIDEWALK OR AGGREGATE SURFACE COURSE.
3. SEWER MAINS SHALL CROSS BELOW WATER SERVICES WITH A MINIMUM VERTICAL SEPARATION OF 18 INCHES WHILE STILL MAINTAINING THE REQUIRED DEPTH OF COVER. IF PROPER SEPARATION IS NOT POSSIBLE, OR IF THE SEWER MAIN MUST BE ROUTED ABOVE THE WATER SERVICE, SEWER MAIN ENCASEMENT SHALL BE REQUIRED AND THE SEWER SHALL BE CONSTRUCTED OF WATER MAIN QUALITY PIPE IN ACCORDANCE WITH THE INDIANA PLUMBING CODE.
4. SEWER MAIN ENCASEMENT SHALL BE PVC SDR 26 (ASTM D-2241), MINIMUM SIZE OF 12". ENCASEMENT SHALL EXTEND TO 10 FEET EITHER SIDE OF THE WATER SERVICE BEING CROSSED AND THE ENDS SHALL BE PLUGGED SEALED WITH MORTAR.
5. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE MAINTAINED IN SERVICE AND BE REPLACED WITH HDPE OR PVC PIPE STORM SEWER OF APPROPRIATE SIZE AND SLOPE.

SANITARY SERVICE & WATERMAIN SERVICE NOTES (SHEET 6)

1. UNLESS NOTED OTHERWISE, ALL SANITARY SEWER & SERVICES SHALL BE IN CONFORMANCE WITH THE FOLLOWING:
   A. PIPE & FITTING MATERIAL – POLYVINYL CHLORIDE (PVC) PIPE: ASTM D3034 (SDR-PR) NSF 14. MINIMUM SDR RATING 26.
   B. GASKETS – FLEXIBLE ELASTOMERIC, ASTM F477
   C. FITTINGS – PVC SDR 18 EXTRA HEAVY BY HARCO. ASTM D3034
   D. JOINTS – ASTM D3212
   E. BEDDING – CLASS II, ASTM 2321
2. ALL UTILITY MAIN AND SERVICE TRENCHES SHALL BE BACKFILLED WITH GRANULAR MATERIAL IN ACCORDANCE WITH THE CURRENT EDITION OF THE "INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS BOOK" WHERE THE TRENCH IS UNDER OR WITHIN 2 FEET OF EXISTING OR PROPOSED, SIDEWALK OR AGGREGATE SURFACE COURSE.
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4. SEWER MAIN ENCASEMENT SHALL BE PVC SDR 26 (ASTM D-2241), MINIMUM SIZE OF 12". ENCASEMENT SHALL EXTEND TO 10 FEET EITHER SIDE OF THE WATER SERVICE BEING CROSSED AND THE ENDS SHALL BE PLUGGED SEALED WITH MORTAR.
5. ALL WATER SERVICES SHALL BE IN CONFORMANCE WITH THE FOLLOWING.
   A. ALL WATER SERVICES SHALL BE 1 1/2" COPPER PIPE, TYPE K.
   B. 1 1/2" CTS HDPE, SDR9 C5-200PSI.
   C. DEPTH OF COVER SHALL BE 48" MIN.

PATRICK J. MOONE 11012297 REGISTERED PROFESSIONAL ENGINEER OF INDIANA

PATRICK J. MOONE
INDIANA PROFESSIONAL ENGINEER NO. 11012297
EXPIRES 07/31/16

10/28/15
DATE:

Farnsworth GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
D/B/A FARNSWORTH ENGINEERING GROUP, INCORPORATED
www.f-w.com
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PROJECT: CASEY'S MARKETING COMPANY

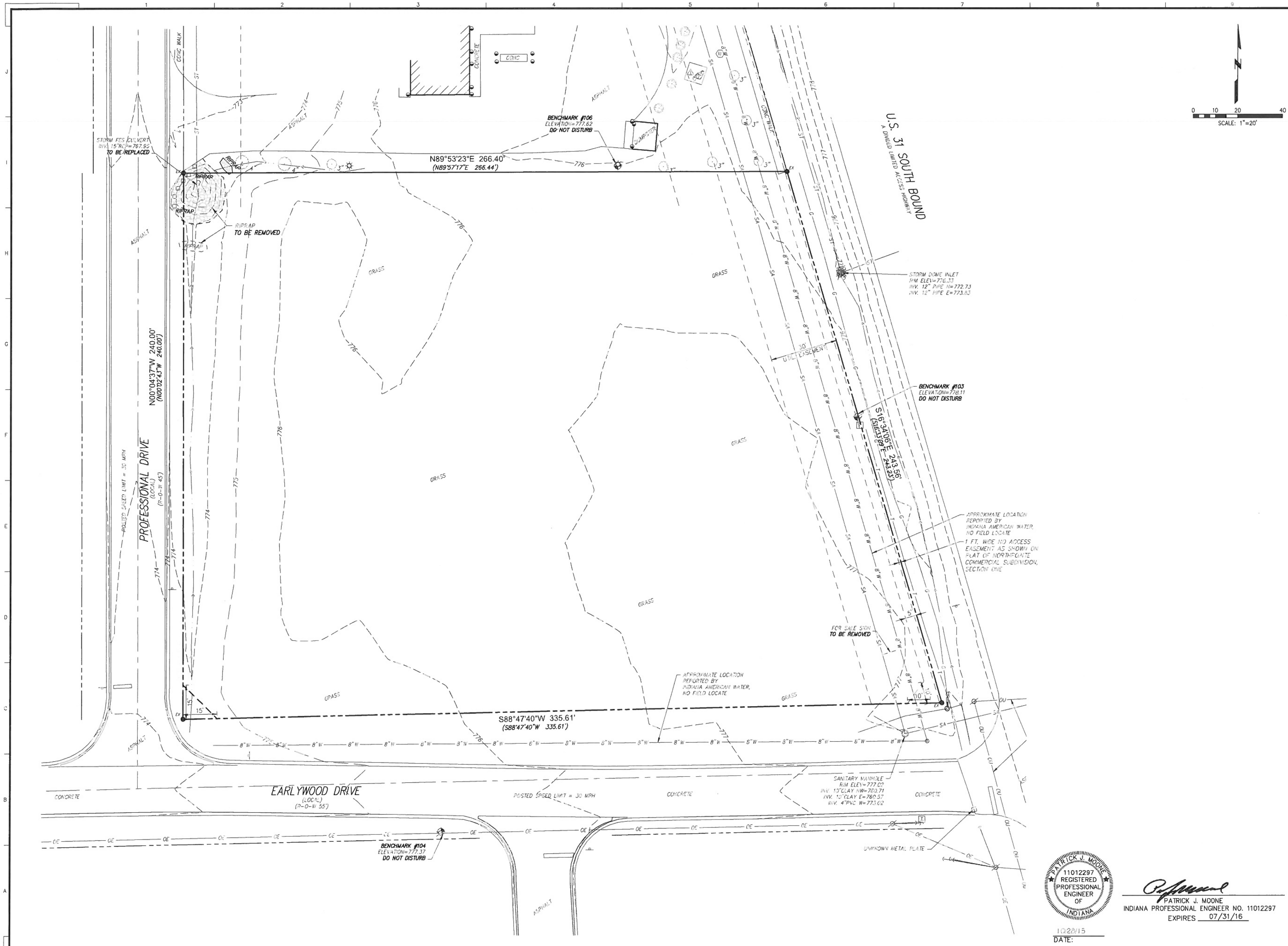
CITY OF FRANKLIN JOHNSON CO., INDIANA

Date:	10-28-15
Design/Drawn:	GAB
Reviewed:	PJM
Book No.: -	Field: -

SHEET TITLE: GENERAL NOTES

SHEET NUMBER: 2 of 13

Project No.: 151019.02



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CITY OF FRANKLIN
JOHNSON CO., INDIANA

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Reviewed:	PJM
Book No.: 116	Field: JL / RN

SHEET TITLE:

EXISTING TOPOGRAPHY & DEMOLITION PLAN

SHEET NUMBER:

3

of 13

Project No.: 151019.02

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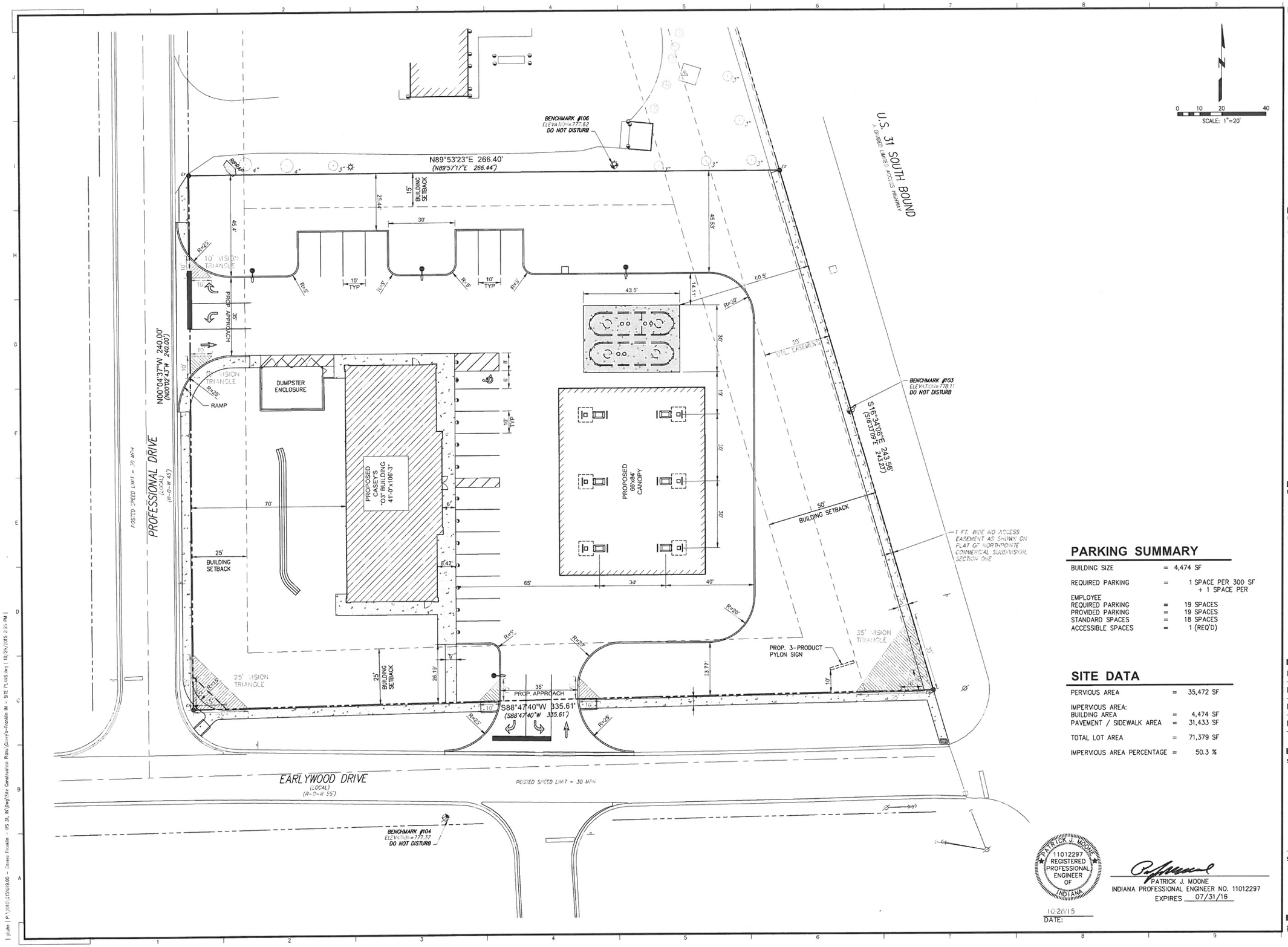

0 10 20 40
SCALE: 1"=20'

PARKING SUMMARY

BUILDING SIZE	=	4,474 SF
REQUIRED PARKING	=	1 SPACE PER 300 SF + 1 SPACE PER EMPLOYEE
REQUIRED PARKING	=	19 SPACES
PROVIDED PARKING	=	19 SPACES
STANDARD SPACES	=	18 SPACES
ACCESSIBLE SPACES	=	1 (REQ'D)

SITE DATA

PERVIOUS AREA	=	35,472 SF
IMPERVIOUS AREA:		
BUILDING AREA	=	4,474 SF
PAVEMENT / SIDEWALK AREA	=	31,433 SF
TOTAL LOT AREA	=	71,379 SF
IMPERVIOUS AREA PERCENTAGE	=	50.3 %

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SHEET TITLE:

LAYOUT PLAN

SHEET NUMBER:

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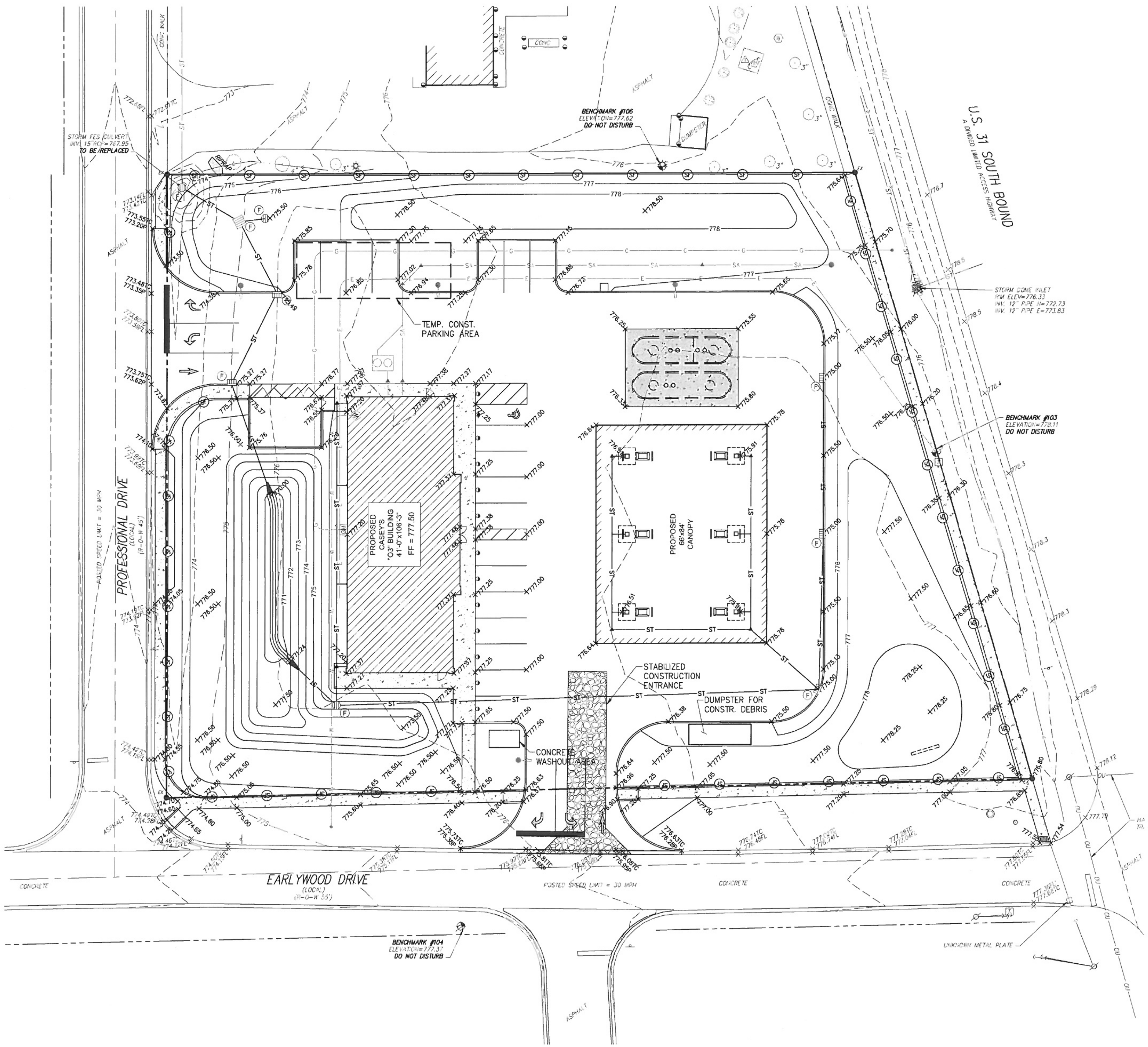
of 13

Project No.: 151019.02



0 10 20 40
SCALE: 1"=20'

NOTES

1. THE CONCRETE WASHOUT, DUMPSTER FOR CONSTRUCTION DEBRIS, AND CONSTRUCTION PARKING MY BE RELOCATED ON THE SITE BY THE SITE SUPERINTENDENT AS REQUIRED AS CONSTRUCTION PROGRESSES.

PATRICK J. MOONE
11012297
REGISTERED
PROFESSIONAL
ENGINEER
OF
INDIANA

PATRICK J. MOONE
INDIANA PROFESSIONAL ENGINEER NO. 11012297
EXPIRES 07/31/16

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Farnsworth
GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
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Book No.: 116	Field: JL / RN

SHEET TITLE:

GRADING & EROSION CONTROL PLAN

SHEET NUMBER:

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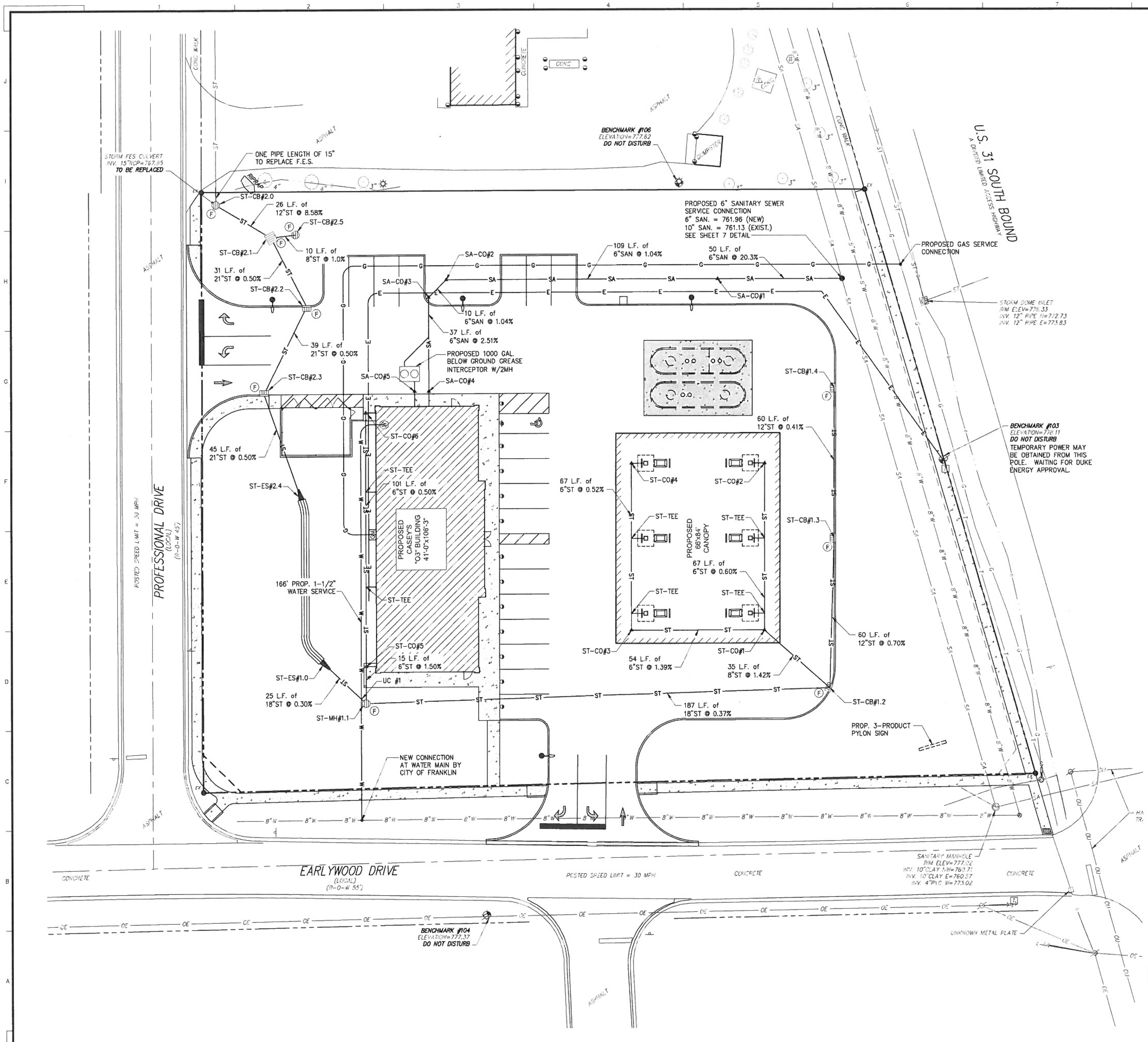
of 13

Project No.: 151019.02



STORM SEWER DATA

ST - ES 1.0
INDOT END SECTION
INV 18" = 771.24

ST - MH 1.1
INDOT TYPE A MANHOLE W/ TYPE 4 FRAME & GRATE
RIM = 775.25
INV 8" = 773.78
INV 18" = 771.31
INV 18" = 771.31

ST - CB 1.2
INDOT INLET TYPE R (SQUARE) W/TYPE 13 FRAME & GRATE
GRATE = 775.00
INV 8" = 772.30
INV 18" = 772.05
INV 12" = 772.08

ST - CB 1.3
INDOT INLET TYPE R (SQUARE) W/TYPE 13 FRAME & GRATE
GRATE = 775.00
INV 12" = 772.50
INV 12" = 772.50

ST - CB 1.4
INDOT INLET TYPE R (SQUARE) W/TYPE 13 FRAME & GRATE
GRATE = 775.00
INV 12" = 772.75

ST - CO 4
CLEAN-OUT CAP = 776.56
INV 6" = 774.05

ST - CO 3
CLEAN-OUT CAP = 776.56
INV 6" = 773.70
INV 6" = 773.70

ST - CO 2
CLEAN-OUT CAP = 775.85
INV 6" = 773.35

ST - CO 1
CLEAN-OUT CAP = 775.85
INV 8" = 772.80
INV 6" = 772.95

ST - CB 2.0
INDOT INLET TYPE A (SQUARE) W/TYPE 2 FRAME & GRATE
GRATE = 773.00
INV 15" = 767.95
INV 12" = 767.20

ST - CB 2.1
INDOT INLET TYPE M W/TYPE 7 FRAME & GRATE
GRATE = 776.50
INV 12" = 769.43
INV 8" = 772.90
INV 21" = 769.43
INV 3.4" ORIFICE = 769.43
INV 7.2" ORIFICE = 774.35

ST - CB 2.2
INDOT INLET TYPE J W/TYPE 10 FRAME & GRATE
TOP OF CURB = 775.90
GRATE = 775.40
INV 21" = 769.58
INV 21" = 769.58

ST - CB 2.3
INDOT INLET TYPE J W/TYPE 10 FRAME & GRATE
TOP OF CURB = 775.70
GRATE = 775.20
INV 21" = 769.77
INV 21" = 769.77

ST - ES 2.4
INDOT END SECTION
INV 21" = 770.00

ST - CB 2.5
INDOT INLET TYPE A W/TYPE 2 FRAME & GRATE
GRATE = 775.50
INV 8" = 773.00

ST - CO 5
CLEAN-OUT CAP = 777.10
INV 6" = 774.00

ST - CO 6
CLEAN-OUT CAP = 777.10
INV 6" = 774.50

SANITARY SEWER DATA

SA-CO #1
CLEAN-OUT CAP = 776.90
INV. 6" = 772.12

SA-CO #2
CLEAN-OUT CAP = 777.65
INV. 6" = 773.25

SA-CO #3
CLEAN-OUT CAP = 777.55
INV. 6" = 773.35

SA-CO #4
CLEAN-OUT CAP = 777.28
INV. 6" = 774.28

SA-CO #5
CLEAN-OUT CAP = 777.38
INV. 6" = 774.28

UTILITY CROSSINGS

UC#1
INV. 18" STORM = 771.27
TOP 18" STORM = 772.77
INV. 1-1/2" WATER = 769.64
TOP 1-1/2" WATER = 769.77
(WATER SERVICE CROSSES BELOW STORM)

PATRICK J. MOONE
INDIANA PROFESSIONAL ENGINEER NO. 11012297
EXPIRES 07/31/16

PATRICK J. MOONE
11012297
REGISTERED PROFESSIONAL ENGINEER OF INDIANA

10/29/15
DATE:

Farnsworth GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
D/B/A FARNSWORTH ENGINEERING GROUP, INCORPORATED
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CITY OF FRANKLIN
JOHNSON CO., INDIANA

Date:	10-28-15
Design/Drawn:	GAB
Reviewed:	PJM
Book No.:	116 Field: JL / RN

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
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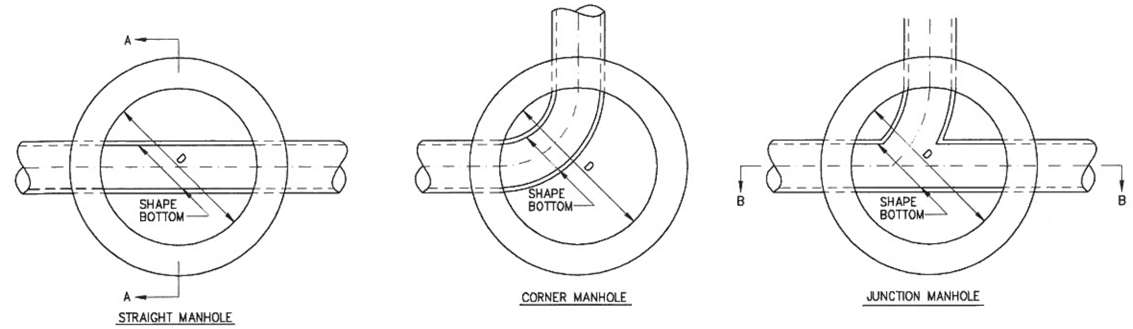
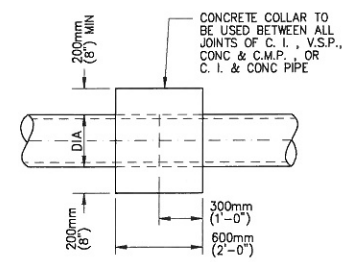
of 13

Project No.: 151019.02





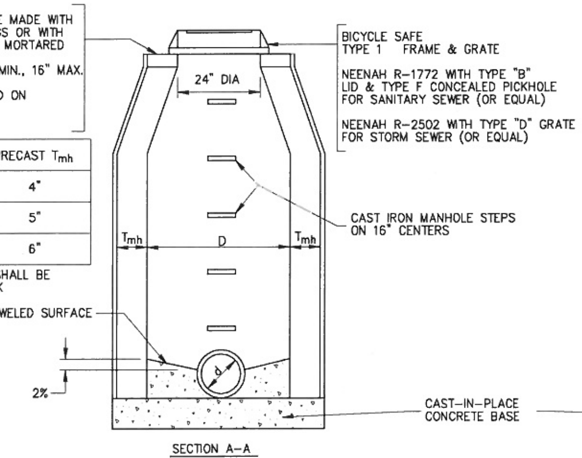
FINAL ADJUSTMENT TO BE MADE WITH PRECAST ADJUSTING RINGS OR WITH BRICKS LAID RADIALLY & MORTARED

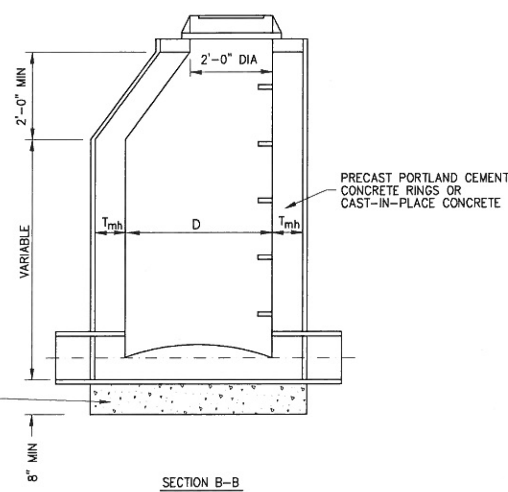
ADJUSTMENT RANGE: 4" MIN., 16" MAX.

MASTIC IS NOT PERMITTED ON ADJUSTING RINGS

DIA OF SEWER	DIA OF MANHOLE	PRECAST T_{mh}
THRU 30"	4'	4"
THRU 48"	5'	5"
54"	6'	6"

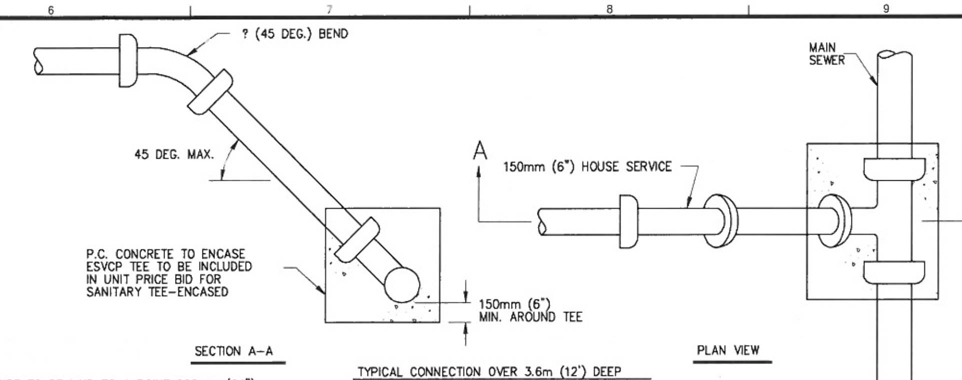
CAST-IN-PLACE MANHOLES SHALL BE A MINIMUM OF T_{mh}= 6" THICK





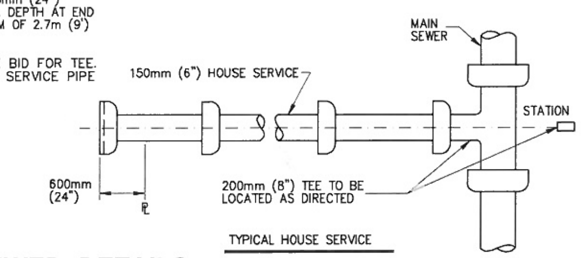
STANDARD MANHOLE PLANS & SECTIONS

NOT TO SCALE



NOTE: 150mm (6") PIPE TO BE LAID TO A POINT 600mm (24") BEYOND THE PROPERTY LINE, OR AS DIRECTED. DEPTH AT END TO BE A MINIMUM OF 2.4m (8') OR A MAXIMUM OF 2.7m (9') UNLESS OTHERWISE DIRECTED

STOPPER TO BE INCLUDED IN UNIT PRICE BID FOR TEE. 150mm (6") STOPPER IN TEE WHERE NO SERVICE PIPE IS TO BE INSTALLED



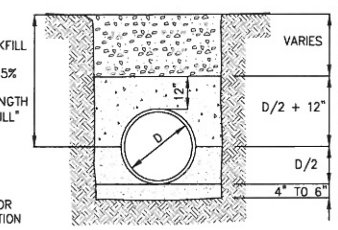
TYPICAL SANITARY SEWER DETAILS

NOT TO SCALE

PIPE TO BE LAID ON A DESIGNED GRADE

UNDER PAVEMENT

INITIAL AND FINAL BACKFILL COMPACTED GRANULAR TRENCH BACKFILL TO 95% STD PROCTOR OR CONTROLLED LOW STRENGTH MATERIAL "FLOWABLE FILL"



NOTE: REFER TO ADS PRODUCT NOTE 3.115 AND ASTM D-2321 FOR ADDITIONAL INSTALLATION SPECIFICATIONS.

OUTSIDE OF PAVEMENT INSTALLATION

FINAL BACKFILL SELECT MATERIAL EXCAVATED FROM TRENCH 12" MAX. LIFT COMPACTED TO 85% STD. PROCTOR

INITIAL BACKFILL CLASS I, II, III OR IV MATERIALS *ONLY LOW PLASTICITY CLASS IV (IVa) MATERIALS WITH CLASS I, II OR III GRADATION 6" MAX. LIFT - 3" MAX LIFT FOR CLASS IV MATERIAL

HAUNCHING CLASS I, II OR III MATERIAL (8" MAX. LIFT) COMPACTED TO 90% STD. PROCTOR

BEDDING CLASS I, II OR III MATERIALS COMPACTED TO 90% STD. PROCTOR

CLASS I: ANGULAR CRUSHED STONE OR ROCK, DENSE OR OPEN GRADED WITH LITTLE OR NO FINES (1/4" TO 1 1/2")

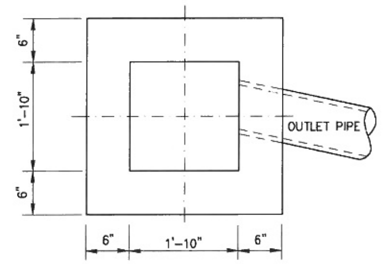
CLASS II: CLEAN, COARSE GRAINED MATERIALS, SUCH AS GRAVEL, COARSE SANDS AND GRAVEL/SAND MIXTURES (1 1/2" MAX.)

CLASS III: COARSE GRAINED MATERIALS WITH FINES INCLUDING SILTY OR CLAYEY GRAVELS OR SANDS. GRAVEL OR SAND MUST COMPRISE MORE THAN 50 PERCENT OF CLASS III MATERIAL (1 1/2" MAX.)

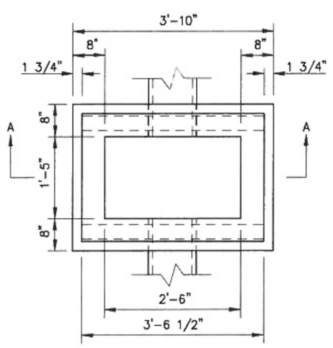
CLASS IV: FINE GRAINED MATERIALS, SUCH AS FINE SAND AND SOILS CONTAINING 50 PERCENT OR MORE CLAY OR SILT. SOILS CLASSIFIED AS CLASS IVa HAVE MEDIUM TO LOW PLASTICITY AND ARE NOT RECOMMENDED, BUT CAN BE USED IN THE BEDDING, HAUNCHING OR INITIAL BACKFILL. SOILS CLASSIFIED AS CLASS IVb HAVE HIGH PLASTICITY AND ARE NOT RECOMMENDED FOR BEDDING, HAUNCHING OR INITIAL BACKFILL.

TYPICAL TRENCH DETAIL FOR HDPE STORM SEWER

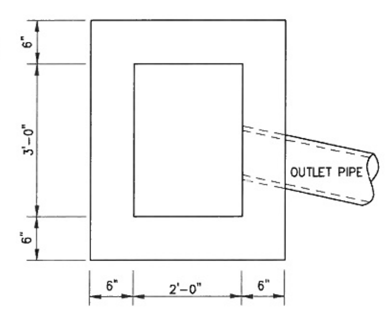
NOT TO SCALE



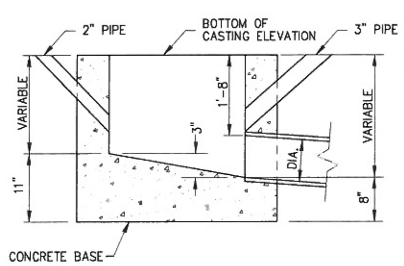
PLAN



PLAN

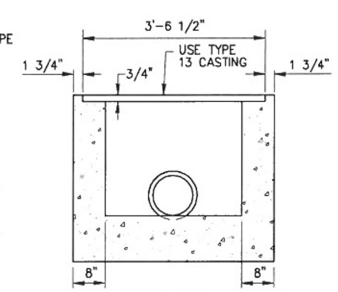


PLAN



NOTE: INLET TO INCLUDE STANDARD INDOT TYPE 8 FRAME, GRATE & CURB OPENING, OR INDOT TYPE-2 FRAME AND GRATE; REFER TO GRADING AND UTILITY PLAN SHEETS (5 & 6).

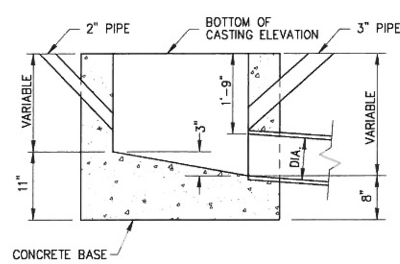
DETAIL OF INLET - TYPE A



SECTION A-A

NOTE: INLET TO INCLUDE STANDARD INDOT TYPE 13 FRAME, GRATE & CURB OPENING.

STANDARD DESIGN FOR INLET - TYPE "R"

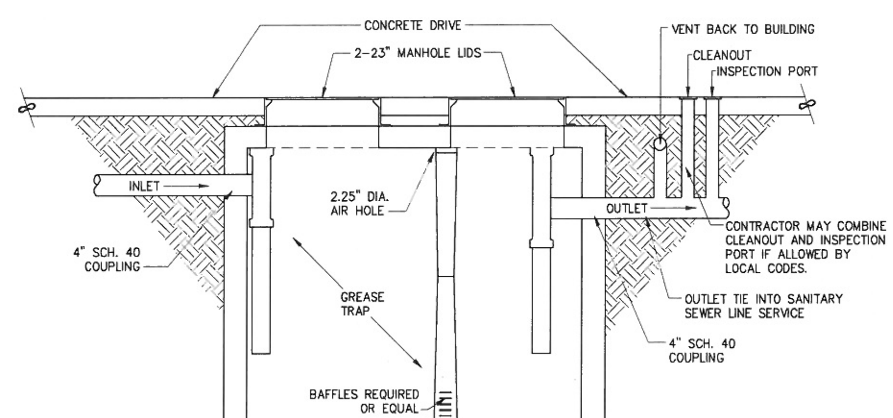


NOTE: INLET TO INCLUDE STANDARD INDOT TYPE 10 FRAME, GRATE & CURB OPENING.

DETAIL OF INLET - TYPE J

STANDARD INLET DESIGN - TYPES 'A', 'J' & 'R'

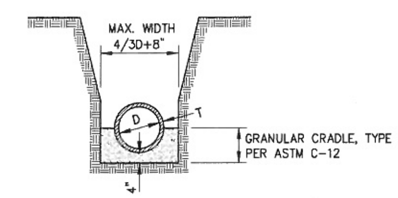
NOT TO SCALE



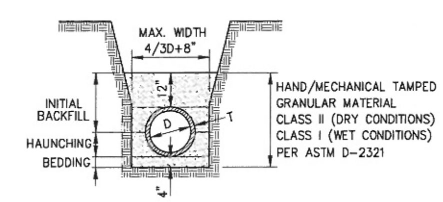
NOTE:
1.) 1,000 GALLON MIN.
2.) FOLLOW MANUFACTURES SPECIFICATIONS ON INSTALLATION PROCEDURES

GREASE TRAP DETAIL

NOT TO SCALE



RIGID SEWER BEDDING & EXCAVATION DETAIL



FLEXIBLE SEWER BEDDING & EXCAVATION DETAIL

SEWER PIPE BEDDING DETAIL

NOT TO SCALE

PATRICK J. MOONE 11012297 REGISTERED PROFESSIONAL ENGINEER OF INDIANA

PATRICK J. MOONE
INDIANA PROFESSIONAL ENGINEER NO. 11012297
EXPIRES 07/31/16

10/28/15
DATE:

Farnsworth GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
D/B/A FARNSWORTH ENGINEERING GROUP, INCORPORATED
www.f-w.com
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ISSUE:

#	Date:	Description:

PROJECT:

CASEY'S MARKETING COMPANY

CITY OF FRANKLIN
JOHNSON CO., INDIANA

Date:	10-28-15
Design/Drawn:	
Reviewed:	PJM
Book No.: -	Field: -

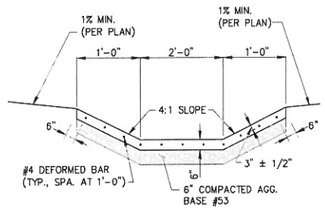
SHEET TITLE:

SANITARY & STORM SEWER DETAILS

SHEET NUMBER:

7
of 13

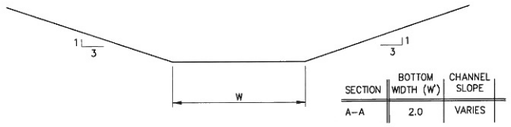
Project No.: 151019.02



ELEVATION VIEW

CONCRETE CHANNEL DETAIL

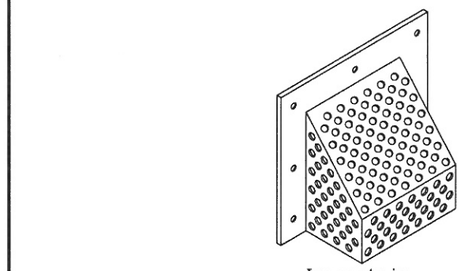
NOT TO SCALE



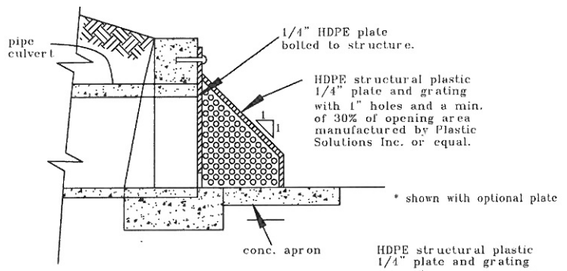
SECTION	BOTTOM WIDTH (W)	CHANNEL SLOPE
A-A	2.0	VARIES

TYPICAL DITCH SECTION DETAIL A-A

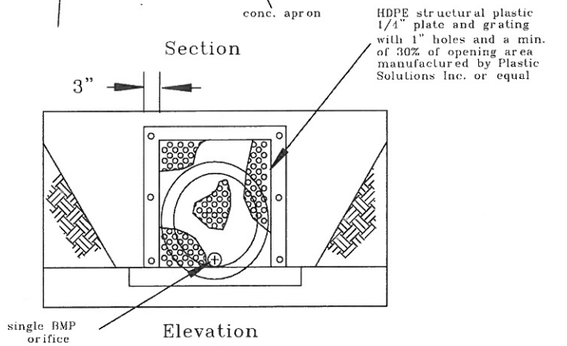
NOT TO SCALE



Isometric



Section



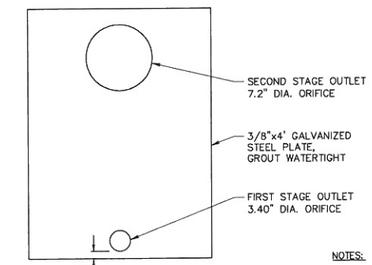
Elevation

BMP TRASH RACK

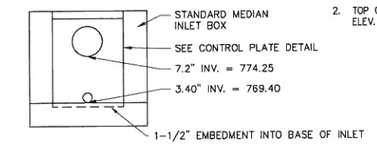
PLASTIC SOLUTIONS INC.
P.O. Box 4386
Winchester VA 22604
877-877-5727
www.plastic-solution.com

TRASH RACK DETAIL

NOT TO SCALE



CONTROL PLATE DETAIL

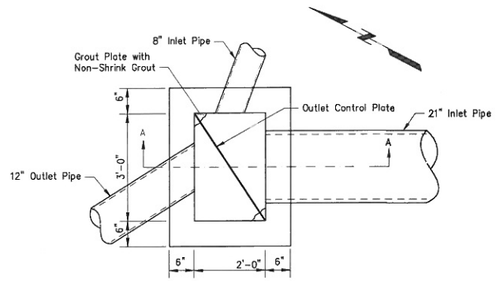


NOTES:

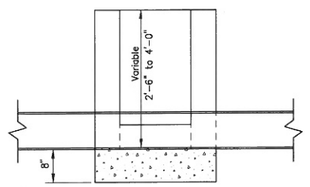
1. JOINTS BETWEEN THE ORIFICE PLATE AND CONCRETE SUPPORT SHALL BE SEALED WITH WATERTIGHT GROUT.
2. TOP OF CONTROL PLATE SHALL BE ELEV. 627.25 MINIMUM.

OUTLET CONTROL MANHOLE 1.1 DETAIL

NOT TO SCALE



PLAN



SECTION A-A

INLET TYPE M (MODIFIED)

NOT TO SCALE

PATRICK J. MOONE
11012297
REGISTERED
PROFESSIONAL
ENGINEER
OF
INDIANA

10/29/15
DATE:

PATRICK J. MOONE
INDIANA PROFESSIONAL ENGINEER NO. 11012297
EXPIRES 07/31/16

Farnsworth GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
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CASEY'S
MARKETING COMPANY

CITY OF FRANKLIN
JOHNSON CO., INDIANA

Date:	10-28-15
Design/Drawn:	
Reviewed:	PJM
Book No.: -	Field: -

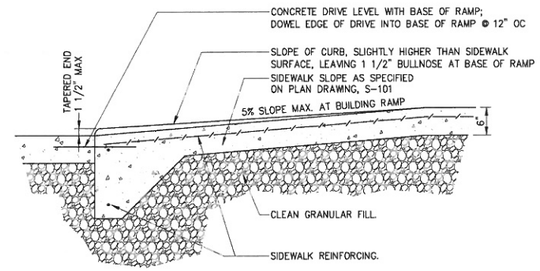
SHEET TITLE:

STORM SEWER DETAILS

SHEET NUMBER:

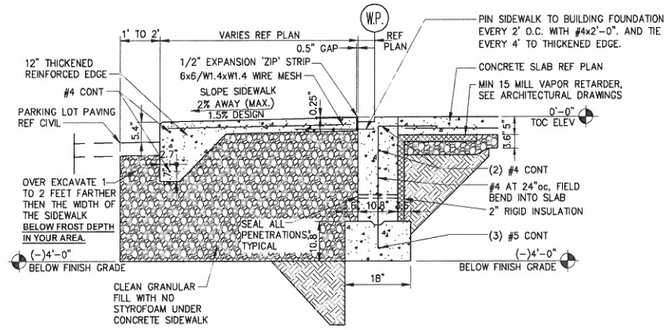
8
of 13

Project No.: 151019.02



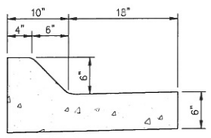
SIDEWALK SECTION RAMP DETAIL

NOT TO SCALE



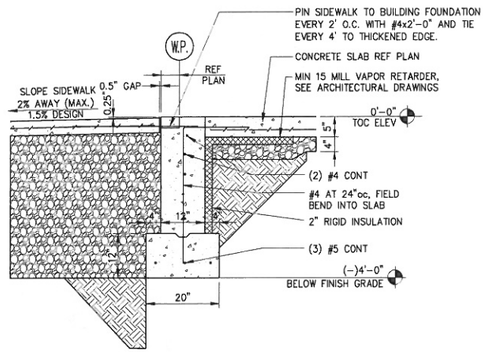
SIDEWALK TYPE SPECIAL DETAIL

NOT TO SCALE



CONCRETE CURB & GUTTER (MODIFIED)

NOT TO SCALE

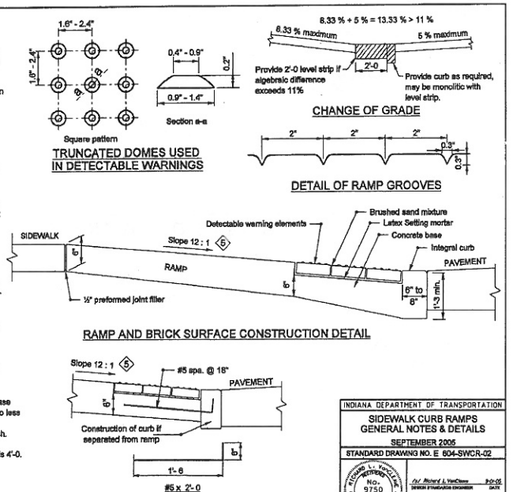


DOOR THRESHOLD DETAIL

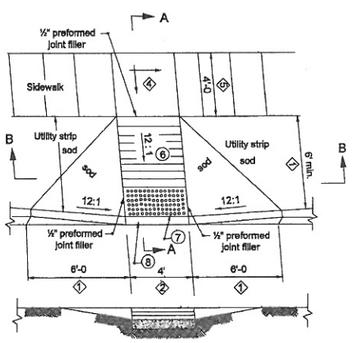
NOT TO SCALE

GENERAL NOTES :

1. These dimensions are based on a 6 in. curb height. They shall be proportionally adjusted for other curb heights.
2. Where site infeasibility precludes construction to the width shown, such width may be decreased to a minimum of 3'-0.
3. The bottom edge of the curb ramp shall be flush with the edge of adjacent pavement and gutter line.
4. Landing areas at the top of curb ramps shall have maximum cross slope of 50 : 1 in any direction. When site infeasibility precludes a landing slope of 50 : 1 in any direction, the slope perpendicular to the curb face shall not exceed 50 :1.
5. If site infeasibility precludes construction to the width shown, the landing width may be decreased to 3'-0 minimum. The running slope of the curb ramp may be steepened to a maximum of 10 : 1 for a maximum 6 in. rise.
6. Drainage inlets should be located uphill from curb ramps to prevent puddles at the path of travel.
7. See Standard Drawing E 604-SWCR-12 for improved access on narrow sidewalks.
8. Algebraic difference in grade between the base of curb ramp and the gutter shall be limited to less than 11%. If it is not practical, a 2'-0 wide level strip shall be provided. See detail sketch.
9. Minimum recommended width of curb ramp is 4'-0.



INDIANA DEPARTMENT OF TRANSPORTATION
SIDEWALK CURB RAMPS
GENERAL NOTES & DETAILS
SEPTEMBER 2005
STANDARD DRAWING NO. E 604-SWCR-02



NOTES :

6. See Standard Drawing E 604-SWCR-02 for groove details.
7. See Standard Drawing E 604-SWCR-02 for details of the detectable warning surface.
8. See Standard Drawing E 604-SWCR-02 for alternate curb construction.
9. See Standard Drawing E 604-SWCR-02 for typical ramp construction detail.
10. See Standard Drawing E 604-SWCR-01 and -02 for Location Plan and General Notes respectively.

INDIANA DEPARTMENT OF TRANSPORTATION
SIDEWALK CURB RAMPS
TYPE C
SEPTEMBER 2005
STANDARD DRAWING NO. E 604-SWCR-05

ACCESSIBLE RAMP DETAILS

NOT TO SCALE

PATRICK J. MOONE
11012297
REGISTERED PROFESSIONAL ENGINEER
OF
INDIANA

10/28/15
DATE:

PATRICK J. MOONE
INDIANA PROFESSIONAL ENGINEER NO. 11012297
EXPIRES 07/31/16

Farnsworth
GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
D/B/A FARNSWORTH ENGINEERING GROUP, INCORPORATED
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CASEY'S
MARKETING COMPANY

CITY OF FRANKLIN
JOHNSON CO., INDIANA

Date:	10-28-15
Design/Drawn:	
Reviewed:	PJM
Book No.:	- Field: -

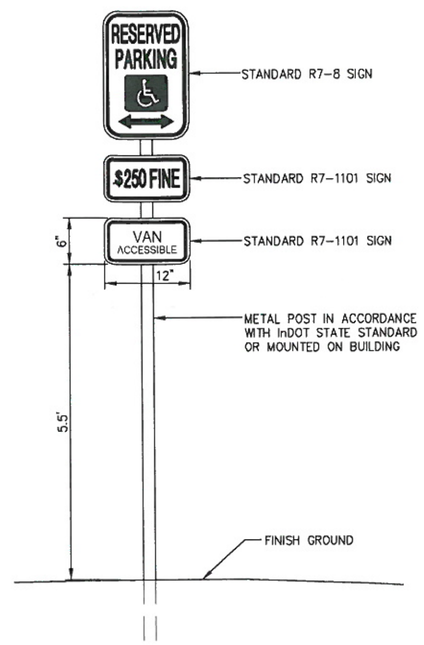
SHEET TITLE:

STANDARD SITE DETAILS

SHEET NUMBER:

9
of 13

Project No.: 151019.02



ACCESSIBLE SIGNAGE DETAIL FOR TURF INSTALLATION

NOT TO SCALE

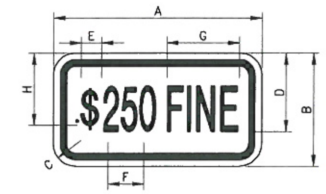
NOTES:

1. ALL DIMENSIONS IN INCHES. THIS SIGN TO BE USED WITH R7-1101.
2. THIS SIGN SHALL BE PLACED AT ALL HANDICAP PARKING SPACES.
3. THE ARROW SHOULD BE OMITTED WHERE THERE IS ONLY ONE SPACE. THE ARROW MAY ALSO BE MADE TO POINT IN ONLY ONE DIRECTION. THE ARROW MAY ALSO BE REPLACED BY "TIME" SUCH AS 9 AM – 5 PM WHERE A PART TIME RESTRICTION EXISTS.
4. THIS IS A STANDARD SIGN AND MAY BE ORDERED FROM ANY TRAFFIC SIGN SUPPLIER BY NUMBER. THE ARROW SHOULD BE OMITTED WHERE THERE IS ONLY ONE SPACE. THE ARROW MAY ALSO BE MADE TO POINT IN ONLY ONE DIRECTION. THE ARROW MAY ALSO BE REPLACED BY "TIME" SUCH AS 9AM–5PM WHERE A PART TIME RESTRICTION EXISTS. THE SIGN MUST BE SUPPLEMENTED WITH THE STANDARD R7-1101 PLATE GIVING THE AMOUNT OF THE FINE FOR ILLEGALLY PARKING IN THE RESERVED SPACE(S).
5. COLORS:
   LEGEND AND BORDER – GREEN
   WHITE SYMBOL ON BLUE BACKGROUND
   BACKGROUND – WHITE

* REDUCE SPACING 50% ** SEE APPENDIX "E" FOR SYMBOL PROPORTIONS

STANDARD ACCESSIBLE SIGN R7-8

NOT TO SCALE



SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
12x6	12.0	6.0	1.5	4.5	1.1	3.0	5.5	3.0

SIGN SIZE	SERIES LINES	MARGIN	BORDER	BLK STD
12x6	1/3A	0.37	0.37	B5-126

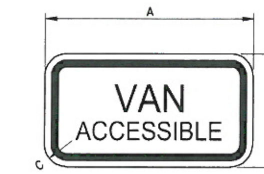
NOTES:

1. ALL DIMENSIONS IN INCHES. THIS SIGN TO BE USED WITH R7-8 (*$=Series 3A "s")
2. THIS SIGN SHALL BE PLACED AT ALL HANDICAP PARKING SPACES.
3. THIS PLATE MAY BE MOUNTED DIRECTLY BELOW THE R7-8 SIGN OR COMBINED WITH THAT SIGN ON A SINGLE 12 INCH BY 24 INCH PANEL.

   FOR A FINE OF $200, USE F=4.0 AND G=4.0 (REDUCE LETTER TO LETTER SPACING AS NECESSARY TO FIT).
4. COLORS:
   LEGEND AND BORDER – GREEN NON-REFLECTORIZED
   BACKGROUND – WHITE REFLECTORIZED

STANDARD ACCESSIBLE SIGN R7-1101

NOT TO SCALE



SIGN SIZE	DIMENSIONS		
	A	B	C
12x6	12.0	6.0	1.5

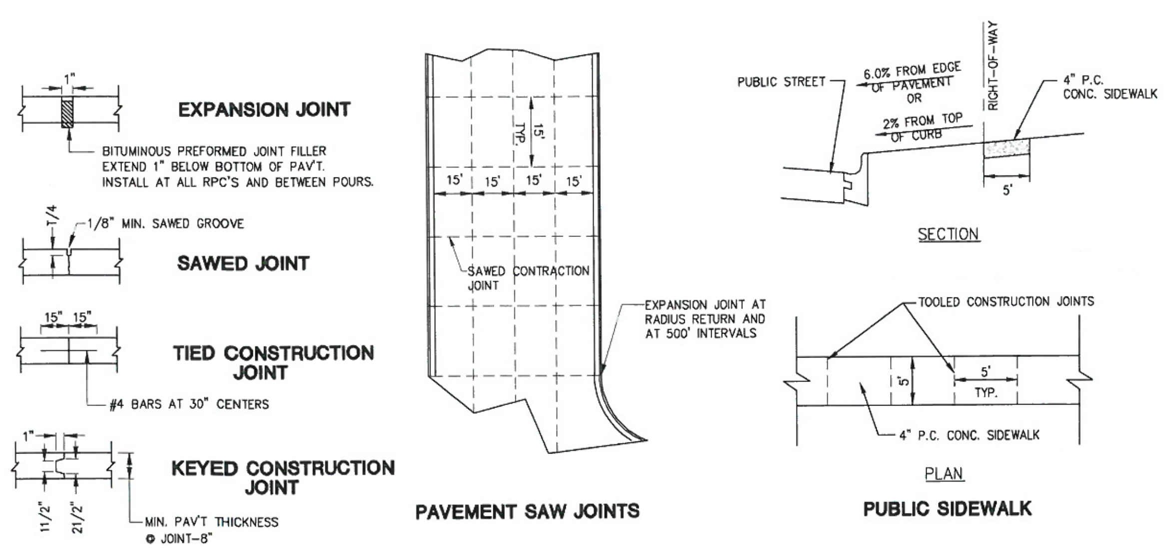
SIGN SIZE	SERIES LINES	MARGIN	BORDER	BLK STD
12x6	1/3A	0.37	0.37	B5-126

NOTES:

1. ALL DIMENSIONS IN INCHES. THIS SIGN TO BE USED WITH R7-8.
2. COLORS:
   LEGEND AND BORDER – GREEN NON-REFLECTORIZED
   BACKGROUND – WHITE REFLECTORIZED

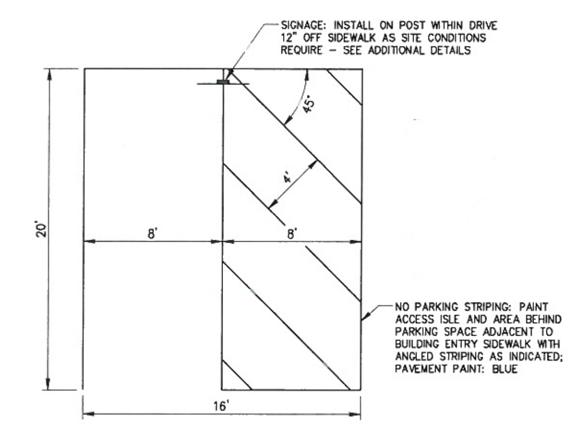
VAN ACCESSIBLE SIGN R7-1101

NOT TO SCALE



CONCRETE JOINTING & SIDEWALK DETAILS

NOT TO SCALE



HANDICAPPED PARKING SPACE DETAIL

NOT TO SCALE

PATRICK J. MOONE 11012297 REGISTERED PROFESSIONAL ENGINEER OF INDIANA

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Farnsworth GROUP
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(217) 352-7408 / info@f-w.com
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CITY OF FRANKLIN
JOHNSON CO., INDIANA

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Design/Drawn:
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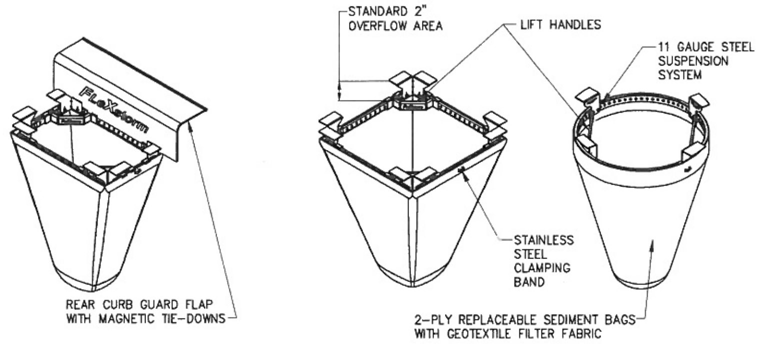
Book No.: - Field: -

SHEET TITLE:
STANDARD SITE DETAILS

SHEET NUMBER:
10
of 13

Project No.: 151019.02

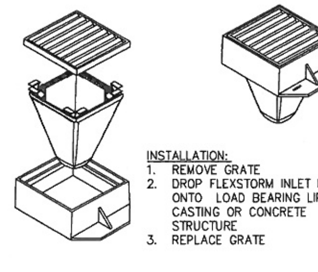


TYPICAL CURB BOX INLET FILTER

TYPICAL FLAT/RECTANGULAR/ROLLED CURB INLET FILTER

TYPICAL ROUND INLET FILTER

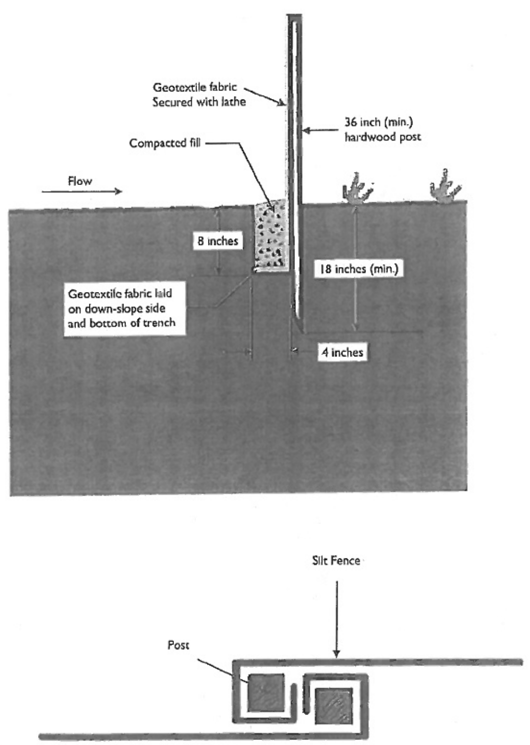
IPP *FLe*Xstorm Inlet Filter Specifications			
Material Property	*Test Method*	*Value (min ave)*	
> Inner Filter Bag Specs (2 ft^3 min vol)		Non-Woven	Woven Mono
Grab Tensile	ASTM D 4632	100 lbs	200 lbs
Puncture Strength	ASTM D 4833	65 lbs	90 lbs
Trapezoidal Tear	ASTM D 4533	45 lbs	75 lbs
UV Resistance	ASTM D 4355	70% at 500 hrs	90%
App Open Size (AOS)	ASTM D 4751	70 sieve (.212 mm)	40 sieve (.425 mm)
Permittivity	ASTM D 4491	2.0/sec	2.1/sec
Water Flow Rate	ASTM D 4491	145 gpm/sqft	145 gpm/sqft
> Polyester Outer Reinforcement Bag Specifications			
Weight	ASTM D 3776	4.55 oz/sqyd +/- 15%	
Thickness	ASTM D 1777	.040 +/- .005	
> Frame Construction			
A36 Structural Steel; 11 Guage; Zinc Plated	ASTM A 576	*Tensile Strength > 58,000 psi; Yield Strength > 36,000 psi*	



INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE

IPP FLEXSTORM INLET FILTER DETAIL

NOT TO SCALE



SILT FENCE DETAIL

NOT TO SCALE

EROSION CONTROL NOTES

TEMPORARY CONSTRUCTION ENTRANCE / EXIT

INSTALLATION:
1. CLEAR AND GRUB AREA FOR THE TEMPORARY CONSTRUCTION ENTRANCE/EXIT
2. GRADE FOUNDATION FOR POSITIVE DRAINAGE.
3. PLACE GEOTEXTILE FABRIC ON GRADED FOUNDATION
4. PLACE AGGREGATE (INDOT CA NO. 2) TO A DEPTH OF 4" AND SLOPE FOR DRAINAGE
5. TOP DRESS THE AGGREGATE WITH 2" OF INDOT CA NO. 53
6. DIVERT STORMWATER AWAY FROM THE PAD AND PUBLIC RIGHT OF WAY

MAINTENANCE
1. INSPECT DAILY
2. RESHAPE PAD AS NEEDED FOR DRAINAGE CONTROL
3. TOP DRESS WITH CA NO. 53 AS NEEDED
4. REMOVE MUD AND DEBRIS FROM PAD TO PREVENT TRACKING OF MATERIAL ONTO PUBLIC RIGHT OF WAYS
5. REMOVE THE STONE AND GEOTEXTILE FABRIC UPON COMPLETION OF PROJECT

SILT FENCE

INSTALLATION:
1. INSTALL SILT FENCE PARALLEL TO THE CONTOUR OF THE SLOPE
2. EXCAVATE AN 8" X 4" TRENCH ALONG THE SILT FENCE LINE
3. INSTALL THE SILT FENCE WITH FILTER FABRIC LOCATED ON THE UP-SLOPE OF THE TRENCH AND STAKES ON THE DOWN-SLOPE SIDE OF THE TRENCH
4. DRIVE THE STAKES AT LEAST 18" INTO THE GROUND. STRETCH THE FILTER FABRIC BETWEEN THE POSTS
5. LAY THE LOWER FOUR INCHES OF THE FILTER FABRIC ON THE BOTTOM OF THE TRENCH
6. BACKFILL THE TRENCH AND COMPACT IN PLACE.

MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST EVERY 7 DAYS
2. REPLACE THE SILT FENCE IF THE FABRIC TEARS, STARTS TO DECOMPOSE, OR OTHERWISE IS INEFFECTIVE
3. REMOVE DEPOSITED SEDIMENT WHEN THE FILTER FABRIC REACHES THE ONE-HALF POINT OR BULGES DUE TO THE ACCUMULATION OF THE SEDIMENT.

CONCRETE WASHOUT

INSTALLATION:
1. LOCATE WASHOUT AREA AND GRADE THE BASE AND REMOVE ROCKS AND OTHER DEBRIS FROM AREA.
2. INSTALL THE POLETHELYNE LINING. THE LINING SHOULD BE INSTALLED OVER THE POOLING AREA AND WITH ENOUGH MATERIAL TO EXTEND OVER THE BERM AREA. FASTEN THE LINING WITH PINS, STAPLE OR OTHER FASTENERS.
3. PLACE FLAGS OR SAFETY FENCING AROUND THE AREA TO PROVIDE A BARRIER TO CONSTRUCTION EQUIPMENT AND TRAFFIC
4. INSTALL SIGNAGE TO IDENTIFY THE WASHOUT AREA.

MAINTENANCE
1. INSPECT DAILY AND WITHIN 24 HOURS OF A RAIN EVENT
2. INSPECT THE INTEGRITY OF THE WASHOUT AREA AND CHECK FOR LEAKS, SPILLS OR TRACKING OF SOIL BY EQUIPMENT
3. CHECK THE LINING FOR TEARS AND PUNCTURES; REPLACE IF NECESSARY
4. REMOVE AND DISPOSE OF CONCRETE THAT HAS HARDENED, AND WHEN THE BASIN REACHES 50% OF CAPACITY. DISPOSE OF THE CONCRETE IN A LEGAL MANNER
5. REPAIR THE STRUCTURE AS NECESSARY ONCE THE CONCRETE HAS BEEN REMOVED
6. INSTALL A NEW LINER AFTER EVERY CLEANING OF THE CONCRETE MATERIAL FROM THE BASIN
7. INSPECT THE CONSTRUCTION SITE REGULARLY TO MAKE SURE CONTRACTORS AND SUPPLIERS ARE USING THE WASHOUT AREA. IF VIOLATIONS ARE NOTED, CLARIFY REQUIREMENTS WITH THE OFFENDING PARTY.
8. WHEN THE WASHOUT AREA IS NO LONGER REQUIRED, DISPOSE OF ANY CONCRETE WITHIN THE BASIN AND THE LINER AS NOTED ABOVE. BACKFILL, GRADE AND STABILIZE THE WASHOUT AREA FOR FINAL USE AS DESIGNATED ON THE PLANS.

FLEXSTORM INLET FILTERS

INSTALLATION:
1. IDENTIFY STORM INLETS ONSITE AND OFFSITE THAT WILL NEED FILTERS. VERIFY FILTER SIZES AND INSTALL FOR INLETS AS SHOWN ON THE GRADING PLAN.
2. ENSURE INLET GRATE IS PROPERLY SEATED IN THE INLET FRAME TO HOLD THE INLET FILTER IN PLACE

MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST EVERY 7 DAYS
2. REPLACE THE INLET FILTER IF THE FABRIC TEARS, STARTS TO DECOMPOSE, OR OTHERWISE IS INEFFECTIVE
3. REMOVE DEPOSITED SEDIMENT WHEN THE INLET FILTER REACHES THE ONE-HALF OF ITS CAPACITY

PERMANENT SEEDING

INSTALLATION:
1. APPLY THE SEED UNIFORMLY THROUGH THE USE OF A BROADCAST SEEDER
2. ENSURE GOOD SEED TO SOIL CONTACT BY FIRMING THE SEEDBED WITH A ROLLER
3. MULCH THE SEEDED AREAS

MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST EVERY 7 DAYS
2. CHECK FOR EROSION OF SOIL OR MULCH; REPLACE OR REPAIR AS NECESSARY
3. FERTILIZE AFTER ONE YEAR AS NECESSARY TO HELP MAINTAIN AND ESTABLISH GROWTH

TEMPORARY SEEDING

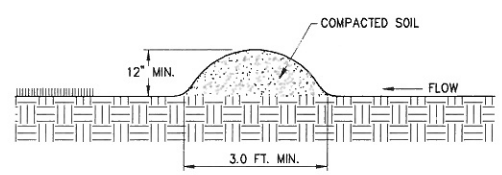
INSTALLATION:
1. SELECT SEED MIXTURE BASED UPON NEED AND TIME OF YEAR TO BE INSTALLED. REFER TO TABLE 1 ON PAGE 32 OF THE INDIANA SWQM
2. APPLY THE SEED UNIFORMLY WITH A BROADCAST SPREADER
3. APPLY MULCH COVER

MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST EVERY 7 DAYS
2. CHECK FOR EROSION OF SOIL OR MULCH; REPLACE OR REPAIR AS NECESSARY
3. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80% DENSITY). RESEED, FERTILIZE AND APPLY MULCH IF NECESSARY.

COMPOST MULCHING

INSTALLATION
1. REMOVE EXISTING ROCKS, LARGE SOIL CLODS, STUMPS, ROOTS AND EXISTING VEGETATION
2. SCARIFY SLOPE AREA
3. AERATE AREAS TO BE COVERED BY MULCH
4. BROADCAST A MINIMUM OF 1 POUND OF NITROGEN, ½ POUND OF PHOSPHOROUS AND ½ POUND OF POTASH PER 1000 SF OF AREA
5. APPLY COMPOST TO AREA WITH A PNEUMATIC BLOWER WITHIN 3 DAYS OF AERATION. APPLY SEED AT TIME OR INSTALLATION IF REQUIRED.
6. WATER COMPOST MULCH FOR A PERIOD OF 60 DAYS FOLLOWING APPLICATION.
   a. MIST BLANKET FOR FIRST SEVEN DAYS THEN EVERY THREE DAYS FOR THE 60 DAY PERIOD
   b. MAINTAIN MOISTURE CONTENT AT 40-60%

MAINTENANCE
1. INSPECT THE MULCH AREA WITHIN 24HOURS OF A RAINFALL EVENT AND AT LEAST EVERY 7 DAYS
2. REPAIR ERODED AREAS
3. RESEED IF APPLICABLE



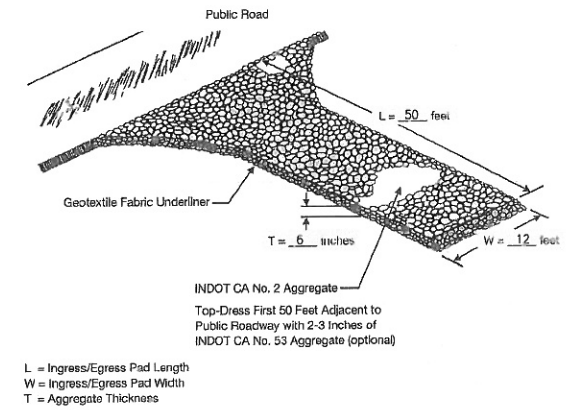
NOTES

1. 1-1/2 :1 OR FLATTER, ALONG WITH A MINIMUM BASE WIDTH OF 3.0 FEET.
2. THE CHANNEL BEHIND THE DIKE SHALL HAVE A POSITIVE GRADE TO A STABILIZED OUTLET. IF THE CHANNEL SLOPE IS LESS THAN OR EQUAL TO 2%, NO STABILIZATION IS REQUIRED. IF THE SLOPE IS GREATER THAN 2%, THE CHANNEL SHALL BE STABILIZED PER THE ILLINOIS URBAN MANUAL.
3. THE DIVERTED RUNOFF, IF FREE OF SEDIMENT, MUST BE RELEASED THROUGH A STABILIZED OUTLET OR CHANNEL.

TEMPORARY DIVERSION DIKE

NOT TO SCALE

Temporary Construction Ingress/Egress Pad
(Large Sites – Two Acres or Larger)



L = Ingress/Egress Pad Length
W = Ingress/Egress Pad Width
T = Aggregate Thickness

CONSTRUCTION ENTRANCE DETAIL

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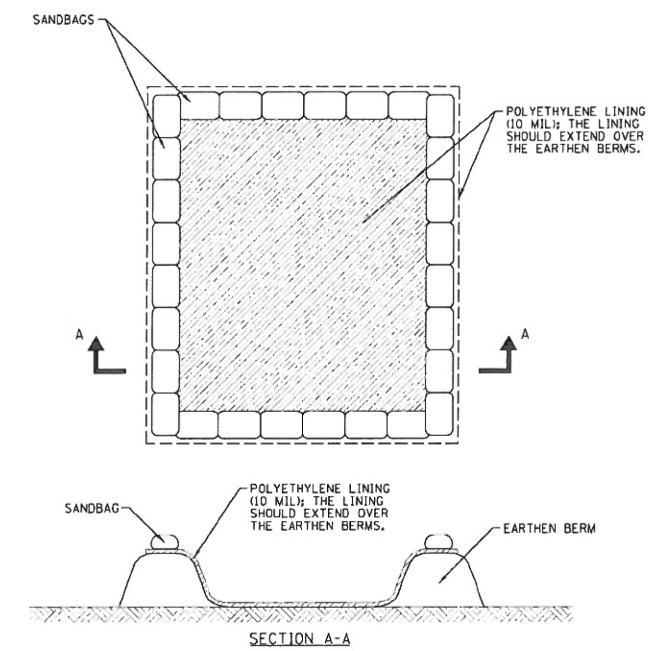

NOTES:
1. LAYDOWN YARD CONCRETE WASHOUT TO BE USED FOR DRUM WASHOUT.
2. LAYDOWN YARD CONCRETE WASHOUT SHALL BE SIZED TO CONTAIN APPROXIMATELY 4000 GALLONS/DAY AND TO CONTAIN RUNOFF THAT DRAINS TO AND ENTERS THE SYSTEM FOR A TWO-YEAR FREQUENCY, 24-HOUR STORM EVENT AND FOR A MINIMUM 12-INCH FREEBOARD PER THE INDIANA STORM WATER QUALITY MANUAL.
3. SIGNS TO BE INSTALLED PER INDIANA STORM WATER QUALITY MANUAL.

CONCRETE WASHOUT AREA DETAIL

NOT TO SCALE

PATRICK J. MOONE 11012297 REGISTERED PROFESSIONAL ENGINEER OF INDIANA

PATRICK J. MOONE
INDIANA PROFESSIONAL ENGINEER NO. 11012297
EXPIRES 07/31/16

10/28/15
DATE:

Farnsworth GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
D/B/A FARNSWORTH ENGINEERING GROUP, INCORPORATED
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EROSION CONTROL & MISCELLANEOUS DETAILS

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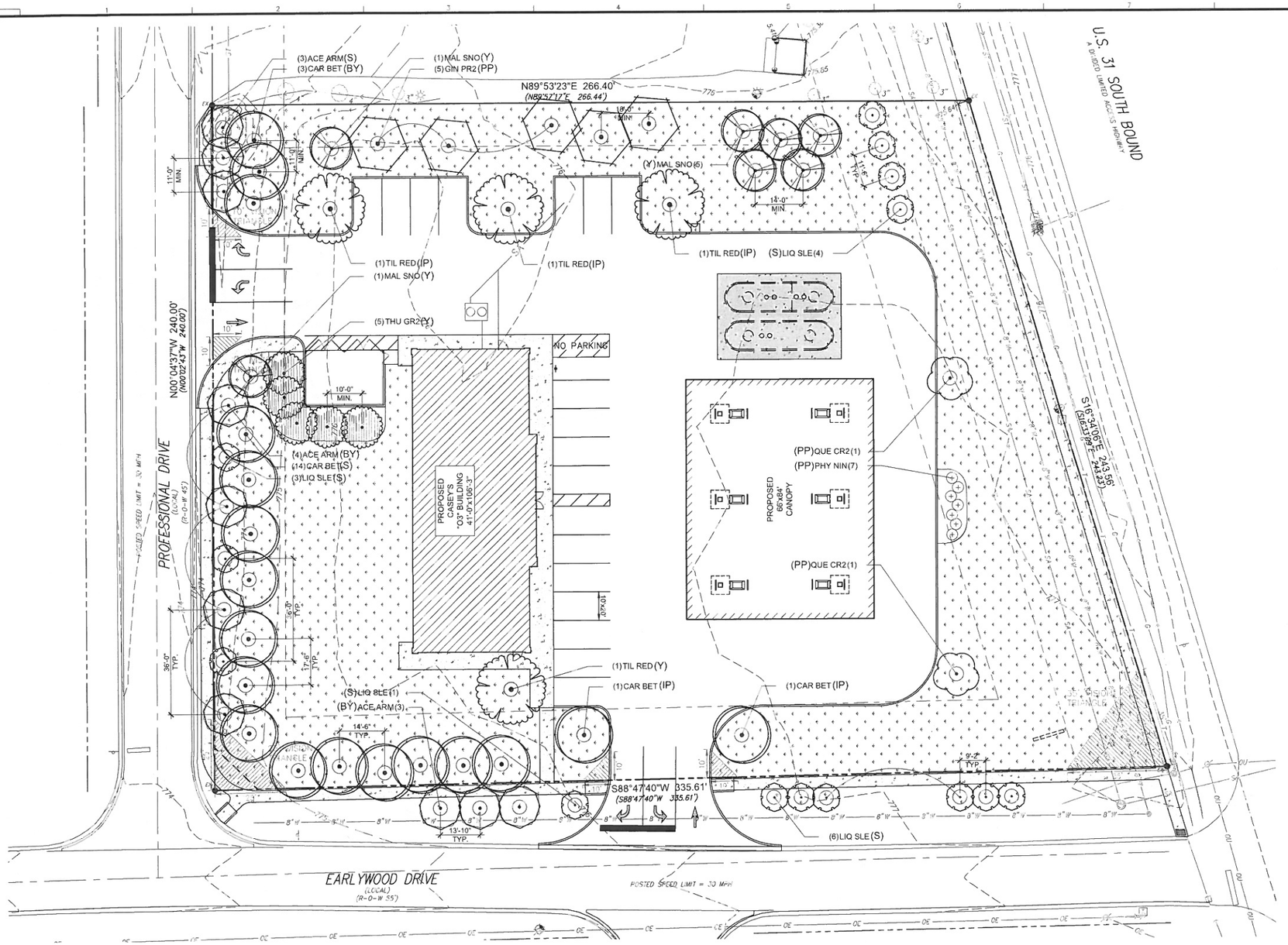

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE
ACE ARM	10	Acer rubrum `Armstrong`	Armstrong Red Maple	2.5" Cal
CAR BET	18	Carpinus betulus `Fastigiata`	Pyramidal European Hornbean	2.5" Cal
GIN PR2	5	Ginkgo biloba `Princeton Sentry`	Princeton Sentry Ginkgo	2.5" Cal
LIQ SLE	14	Liquidambar styraciflua `Slender Silhouette`	Columnar Sweet Gum	2.5" Cal
MAL SNO	7	Malus x `Snowdrift`	Snowdrift Crab Apple	2.5" Cal
QUE CR2	2	Quercus robur x alba `Crimson Spire`	Crimson Spire Oak	2.5" Cal
THU GR2	5	Thuja standishii x plicata `Green Giant`	Green Giant Arborvitae	5' Tall
TIL RED	4	Tilia americana `Redmond`	Redmond American Linden	2.5" Cal

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE
PHY NIN	7	Physocarpus opulifolius `Summer Wine`	Summer Wine Ninebark	18" Tall

GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
	TUR WA2	32,593 sf	Turf Seed Water Saver with RTF	Water Saver Rhizomatous Tall Fescue	Seed	

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LANDSCAPE PLAN

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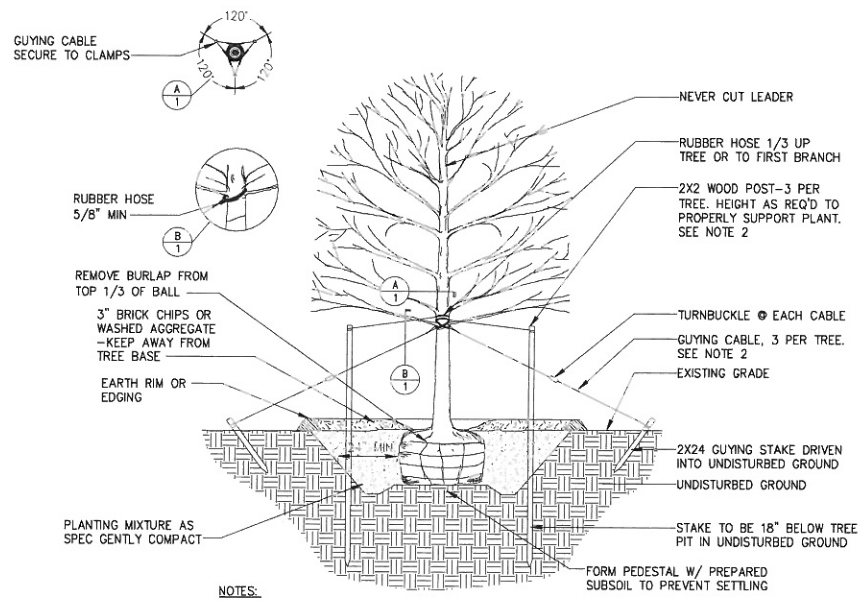


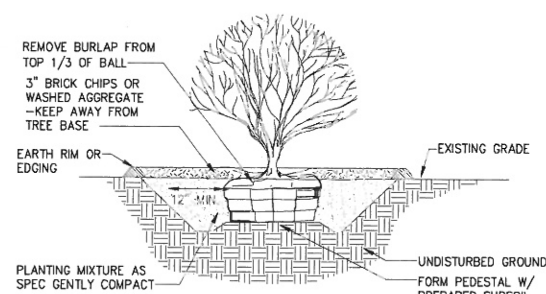
NOTES:

1. TREE SHALL BE PLANTED SO ROOT FLARE IS 2" ABOVE ADJACENT FINISH GRADE.

2. STAKE TREES UNDER 2" CAL. GUY TREES 2" AND OVER.

TREE PLANTING DETAIL

NOT TO SCALE



NOTES:

1. SHRUB SHALL BE PLANTED SO ROOT FLARE IS 1" ABOVE ADJACENT FINISH GRADE.

SHRUB PLANTING DETAIL

NOT TO SCALE

PLANTING GENERAL NOTES

GENERAL:

1. (SITE CONDITIONS) – THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL FIELD CONDITIONS TO THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH WORK.

2. (DETAILS) – ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSIDERED TO APPLY TO SIMILAR CONDITIONS ELSEWHERE.

3. (WARRANTY/REPLACEMENTS) – PROVIDE A ONE YEAR WRITTEN WARRANTY ON ALL PLANT MATERIAL. WARRANTY INCLUDES REPLACING ANY PLANT WHICH IS 25% OR MORE DEAD, DISEASED, OR DISFIGURED ONCE DURING THE WARRANTY PERIOD. PLANTS THAT ARE IDENTIFIED AS BEING REPLACED SHALL BE REMOVED IMMEDIATELY FROM THE SITE BY THE CONTRACTOR. REPLACEMENT PLANTS SHALL BE INSTALLED AS SOON AS THEY ARE AVAILABLE, PROVIDED THE WEATHER AND SEASON ARE CORRECT FOR INSTALLATION. UPON NOTICE TO REPLACE PLANT MATERIAL THE CONTRACTOR SHALL PROVIDE THE OWNER A SCHEDULE FOR THE REPLACEMENTS TO TAKE PLACE. SHOULD THE CONTRACTOR FAIL TO REMOVE AND REPLACE THE PLANT MATERIAL PER THAT SCHEDULE THE OWNER RESERVES THE RIGHT TO USE FUNDS BEING HELD TO OBTAIN THE SERVICES OF ANOTHER CONTRACTOR AND HAVE THE WORK COMPLETED.

4. (DISCREPANCIES) – IF THERE ARE DISCREPANCIES BETWEEN PLANT QUANTITIES ON THE PLANS AND THE PLANT SCHEDULE USE THE QUANTITIES FROM THE PLAN. ALL QUANTITIES ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO BUILD WHAT IS SHOWN ON THE PLANS IF THERE ARE ANY DISCREPANCIES IN THE LABELING.

5. (LAYOUT) – SCALE FROM THE DRAWING AND STAKE THE LOCATIONS OF ALL SPADE EDGING, SHADE TREES, AND EVERGREEN TREE AND RECEIVE OWNER APPROVAL PRIOR TO INSTALLATION.

6. (LAYOUT) – VERIFY EXISTING UTILITIES PRIOR TO INSTALLATION.

PLANT MATERIAL:

1. (SUBSTITUTIONS) – PLANT SUBSTITUTIONS WILL NOT BE ACCEPTABLE UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.

2. (LAYOUT/SPACING) – PLANT SPACING WILL BE SCALED ON PLAN UNLESS NOTED OTHERWISE.

3. (PLANTING MIX) – FOR BIDDING PURPOSES ONLY, PLANTING MIX FOR ALL TREE PITS SHALL BE FORMED BY THOROUGHLY MIXING PIT EXCAVATIONS AND COMPOST (pH OF 5.5 TO 7.0) AT A 3:1 RATIO AND PLACING INTO EXCAVATED PIT AS SHOWN IN LANDSCAPE DETAILS. FORM PLANTING MIX IN PLANTING BEDS BY SPREADING 12" OF TOPSOIL AND 2" OF COMPOST AND ROTOTILLING THOROUGHLY. FINAL RATIOS OF COMPOST TO TOPSOIL WILL BE DETERMINED BY SOIL ANALYSIS REPORTS.

4. (PLANT QUALITY) – ALL PLANTS SHALL BE NORMAL HEALTH, HEIGHT, LEAF DENSITY, AND SPREAD AS DEFINED BY THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1 LATEST AVAILABLE EDITION, OR THE AMERICAN ASSOCIATION OF NURSERYMEN.

5. (PLANT SIZES) – THE SIZES INDICATED IN THE PLANT SCHEDULE ARE THE MINIMUM REQUIRED AT THE TIME OF PLANTING.

SITE:

1. (SITE CONDITIONS) – THE CONTRACTOR SHALL FAMILIARIZE HIM OR HERSELF WITH THE SCOPE OF WORK, SOIL, LOCATION OF UTILITIES, AND WATER CONDITIONS BEFORE PROCEEDING WITH THE WORK. PROPOSED PLANTINGS SHALL NOT BE INSTALLED WITHIN 5' OF ANY WATER, SANITARY OR STORM MAINS.

2. (GRADING) – FINISH GRADES IN PLANTING BEDS ARE TO BE SMOOTH AND PROVIDE POSITIVE DRAINAGE PRIOR TO PLANT, SHREDDED HARDWOOD MULCH, AND LAWN INSTALLATION.

3. (CONSTRUCTION DAMAGE) – CONTRACTOR IS TO PREVENT DAMAGE TO CURBS AND PAVEMENTS ADJACENT TO CONSTRUCTION.

4. (SITE PREPARATION) – REMOVE ANY EXISTING LAWN AND OTHER MATERIAL HARMFUL TO PLANT GROWTH PRIOR TO FORMING PLANTING BEDS.

5. (SEEDING) – SPREAD INDOT SEED MIXTURE GRASS TYPE 1 AND MULCH PER SECTION 621.05 OF THE "STANDARD SPECIFICATIONS", 2012 EDITION.

6. (LAWN SEEDING TIMES) – SOD AND SEED LAWN PLANTING TIMES. APRIL 1 TO JUNE 1 OR AUGUST 15 TO OCTOBER 15.

MAINTENANCE:

1. (PLANT MATERIAL) – MAINTAIN ALL PLANT MATERIAL PER SPECIFICATIONS. THIS INCLUDES THE 60 DAY MAINTENANCE PERIOD AFTER THE DATE OF SUBSTANTIAL COMPLETION. UPON RECEIVING SUBSTANTIAL COMPLETION OF THE WORK THE CONTRACTOR SHALL PREPARE A WRITTEN MAINTENANCE SCHEDULE FOR THE NEXT 60 DAYS AND REVIEW IT WITH THE OWNER. SHOULD THE CONTRACTOR FAIL TO PROVIDE THIS SCHEDULE OR PERFORM THE MAINTENANCE OF THE PLANT MATERIAL THE OWNER RESERVES THE RIGHT TO USE FUNDS BEING HELD TO OBTAIN THE SERVICES OF ANOTHER CONTRACTOR AND HAVE THE WORK COMPLETED.

2. (LAWN) – MAINTAIN SEEDED LAWNS BY WETTING, WATERING, REMULCHING, RESEEDING/SODDING, AND ROLLING AS REQUIRED TO GROW A HEALTHY LAWN FOR 60 DAYS AFTER SUBSTANTIAL COMPLETION. AT END OF MAINTENANCE PERIOD, IF SELECTED, LAWN WILL BE REVIEWED BY OWNER'S REPRESENTATIVE. CONTRACTOR IS TO CORRECT LAWN TO SATISFACTION OF OWNER'S REPRESENTATIVE. DURING FIRST WEEK AFTER PLANTING, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF 1-1/2 INCHES BELOW GROUND. FOR THE ENTIRE MAINTENANCE PERIOD OF SEEDED LAWN (AFTER FIRST WEEK), WATER WITH FINE SPRAY AT A MINIMUM RATE OF 1 INCH PER WEEK UNLESS RAINFALL PRECIPITATION IS ADEQUATE SO TURF IS UNIFORMLY MOIST TO A DEPTH OF FOUR INCHES.

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GROUP
2211 WEST BRADLEY AVENUE
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LANDSCAPE PLAN NOTES AND DETAILS

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